Chapter 7
The Projman Application

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Overview

The Projman application is a user-friendly graphical user interface for performing project management with the SAS System. Through the use of an interactive Gantt chart window provided by the PM procedure, you can easily create and manage multiple projects. For more information, see Chapter 6, “The PM Procedure.”

Projman is accessed by invoking the **projman** command in the SAS Display Manager or by selecting Solutions->Analysis->Project Management from the primary SAS menu. When you invoke Projman, the Projman Window is displayed. This window is the primary window for accessing the functionality of the application. See the “Projman Window” section on page 686 for more information.

Projman enables you to define multiple projects, information about which is stored in a project dictionary data set. For more information about this data set, see the “PROJDICT= Option” section, which follows. To access the data associated with a project, you use the Project Information Window. This window provides access to interfaces for defining data corresponding to activities, calendars, holidays, resources, and workshifts. See the “Project Information Window” section on page 690 for more information.

Projman also provides a variety of project reports. These reports include Gantt charts, network diagrams, calendars, and tabular listings, as well as resource usage and cost reports. You can easily modify any of the standard reports to add your own personalized reports to the application. For more information on reports, see the “Reports Window” section on page 712.

For general information about project management, consult the glossary on page 751.

Projman Command

The **projman** command supports two options:

- PROJDICT=
- project name

PROJDICT= Option

The PROJDICT= option is used to specify the location of the Projman project dictionary data set. The project dictionary data set stores the definition of each project created with the Projman application.

Valid values for the option are a two-level SAS data set name (that is, <library>.<dsname>, where <library> is a currently defined SAS libname and <dsname> is a valid SAS data set name).

If the data set specified with the PROJDICT= option does not exist, Projman attempts to create a new project dictionary data set at that location. If the data set already exists and it is not a valid project dictionary data set, Projman uses the default project dictionary data set location, SASUSER.PROJDICT.

Project Name Option

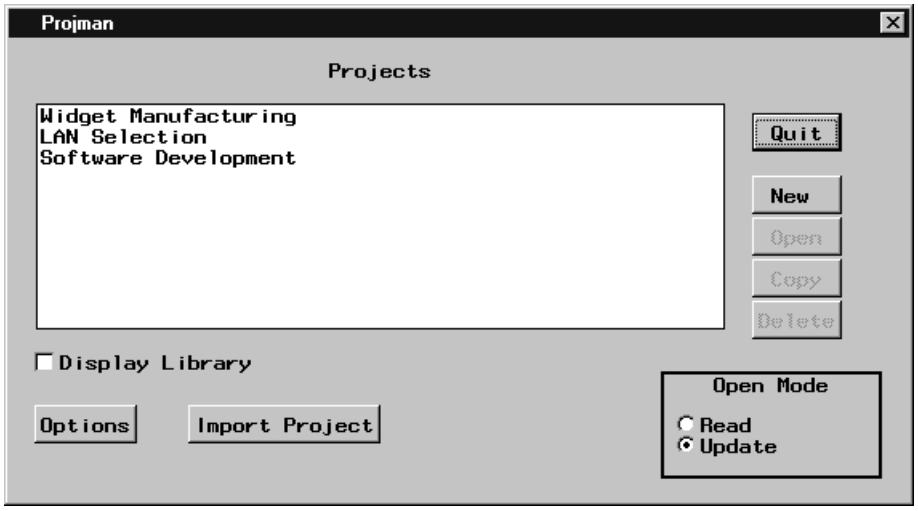
The Project Name option can be used to indicate a project that should be opened automatically when Projman is started. If the project does not exist, Projman produces a warning message.

To specify project names that contain multiple adjacent blanks (that is, "Project _ _ _ ABC"), enclose the name in double quotes.

Projman Window

The Projman Window is the initial window opened by the Projman application. When you start the application, all currently defined projects are listed in this window. To view an existing project, select the desired name in the project list and press the Open button. Projects can be opened with either *read* or *update* access.

When a new or existing project is opened, a Project Information window is displayed. Individual project data can be manipulated from that window. For more information, see the "Project Information Window" section on page 690.



Quit

Pressing the Quit button exits the Projman application. If projects are open with update access and changes have been made, you are prompted to save changes.

New

Pressing the New button creates a new project and opens that project with update access. A default project name (Project*n*, where *n* is an integer) is automatically generated and added to the project list. When creating a new project, you are prompted

to select the library where the project data is to be stored. After you select a library, the Project Information window is opened. For more information on that window, see the "Project Information Window" section on page 690.

Open

Pressing the Open button opens the selected project with read or update access. The access level is determined by the current setting of the Open Mode option. In order to save modifications to a project, you must open the project with update access. While you have a project open with update access, other users are only able to obtain read access to that project.

Copy

Pressing the Copy button copies the selected project. When copying a project, you are prompted to select the library where the project data is to be stored. You are also required to specify a unique project name. The new project name automatically appears in the project list.

Delete

Pressing the Delete button deletes the selected project. In order to delete a project, you must be able to obtain update access. In other words, no other user can have the project open with update access.

Display Library

This option is used to toggle the display of project library names within the project list. The library name indicates the library reference to the SAS data library where a particular project's data is stored. If a project's library reference is not defined, Projman is unable to open the project.

Options

When this button is pressed, the Projman Options window is displayed. For information on this window, see the "Projman Options Window" section on page 688.

Import Project

When this button is pressed, the Import Project window is opened. For information on this window, see the "Import Project Window" section on page 689.

Open Mode

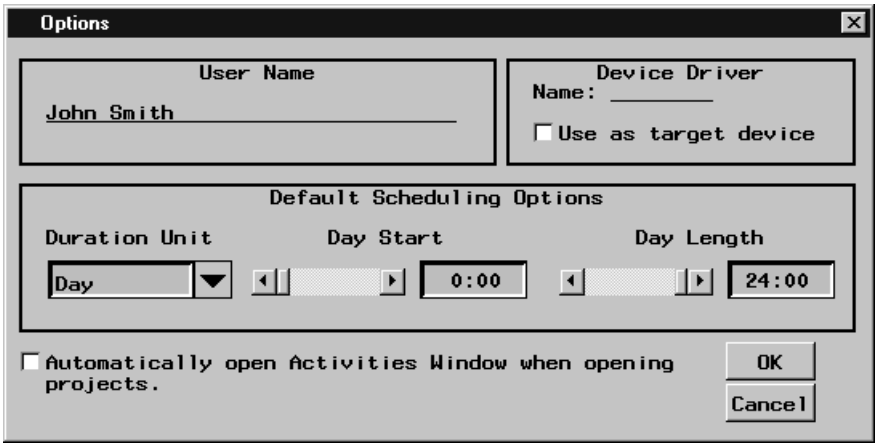
The Open Mode option is used to specify whether projects are to be opened with read or update access. When a project is opened with read access, you may modify a *working* copy of the project data, but you are unable to save those changes when the project is closed (although you can use the Save As feature to save the modified project as a different project).

When a project is opened with update access, no other Projman session can open that same project with update access; however, read access would be available. It is necessary to use update access if you want to save changes to the current project.

For different users to have simultaneous read access to the same project, SAS/SHARE software is required. Note that only one user can have update access to a particular project at a particular time. Access level does not affect the ability to produce project reports.

Projman Options Window

The Projman Options window enables you to manipulate options that control the behavior of the Projman application.



User Name

The User Name field can be used to specify the user's name, which is used to indicate who last modified a project. Modification information appears in the Project Schedule Summary window. For information on that window, see the "Project Schedule Summary Window" section on page 691.

Device Driver

The Device Driver field can be used to specify the name of the device driver that is to be used when printing reports. You can also indicate whether or not to use this device as a "target" device when reports are shown on the screen. In other words, the graphics output on the screen emulates the characteristics of the device listed in the Device Driver field.

Default Scheduling Options

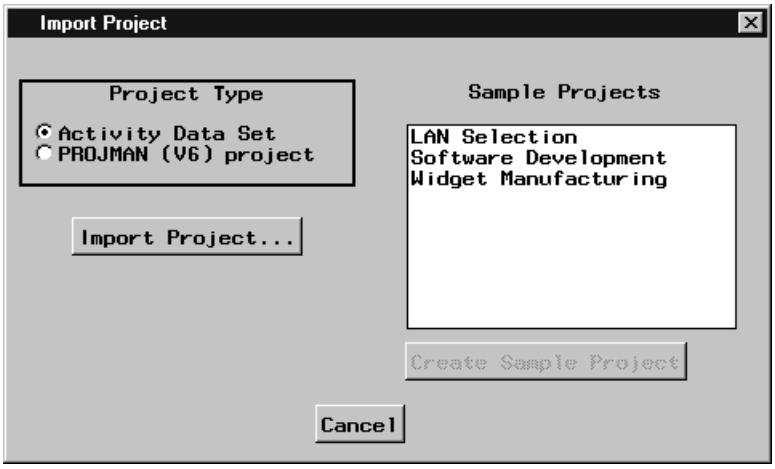
The Default Scheduling Options enable you to set default values for the project's duration unit, day start, and day length parameters. Note that changing the values of these options does not affect projects that already exist.

Automatically open Activities Window when opening projects.

If this option is selected, a project's Activities window (an interactive Gantt chart window provided by the PM procedure) automatically opens when the project is opened. For more information, see the "PM Window" section on page 692.

Import Project Window

The Import Project window enables you to import external project data or create sample projects.



Activity Data Set

When this option is selected and the Import Project... button is pressed, the Import Activity Data Set window is opened. For more information, see the “Import Activity Data Set Window” section on page 737.

PROJMAN (V6) project

When this option is selected and the Import Project... button is pressed, you are presented with a list of Version 6 Projman projects to import.

Import Project...

Depending upon the setting of Project Type as "Activity data set" or "PROJMAN (V6) project," pressing this button commences the appropriate import process.

Sample Projects

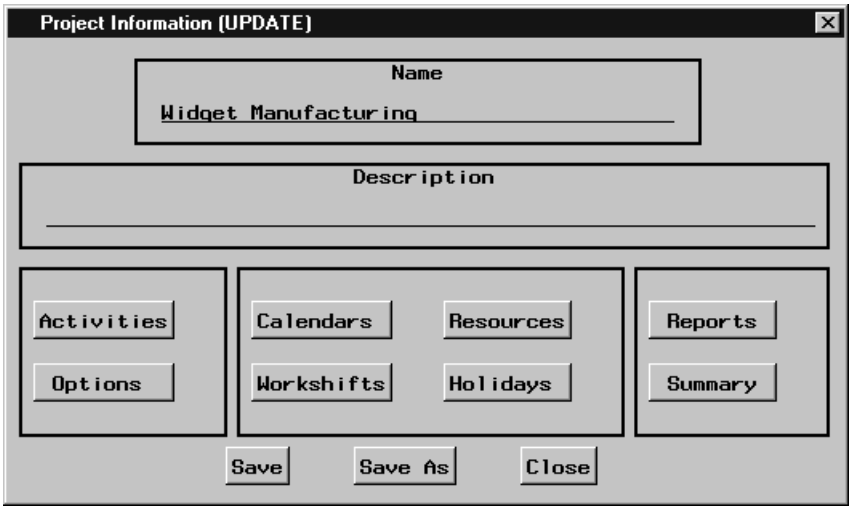
This list displays the sample projects that are currently available with the Projman application. Make the desired selection and use the Create Sample Project button to create a sample project.

Create Sample Project

Use this button to create the sample project that is currently selected in the Sample Projects list.

Project Information Window

The Project Information window is initially displayed when a project is opened for read or update. The access control level is indicated in the window title. In this window, you can edit the project name and description as well as access windows for specifying project data and producing reports.



Name

The Name field is used to specify the name of the project. Project names must be unique. A longer description can be given in the Description field.

Description

The Description field is provided to give the opportunity for storing a short description of the project. A description is purely optional and is used for identification purposes only.

Activities

When this button is selected, the PM window (an interactive Gantt Chart provided by the PM procedure) displays the current project structure and schedule. Within this window, activities can be added and deleted and corresponding data can be modified. For more information, see the "PM Window" section on page 692.

Options

This selection is used to access a window for setting project scheduling options, as well as a window for adding variables to the Activity data set. For more information on project scheduling options, see the "Schedule Options Window" section on page 705.

Calendars

When this button is pressed, the Calendars window is opened. For information on this window, see the "Calendars Window" section on page 693.

Holidays

When this button is pressed, the Holidays window is opened. For information on this window, see the "Holidays Window" section on page 695.

Resources

When this button is pressed, the Resources window is opened. For information on this window, see the "Resources Window" section on page 697.

Workshifts

When this button is pressed, the Workshifts window is opened. For information on this window, see the "Workshifts Window" section on page 703.

Reports

When this button is pressed, the Reports window is opened. For information on this window, see the "Reports Window" section on page 712.

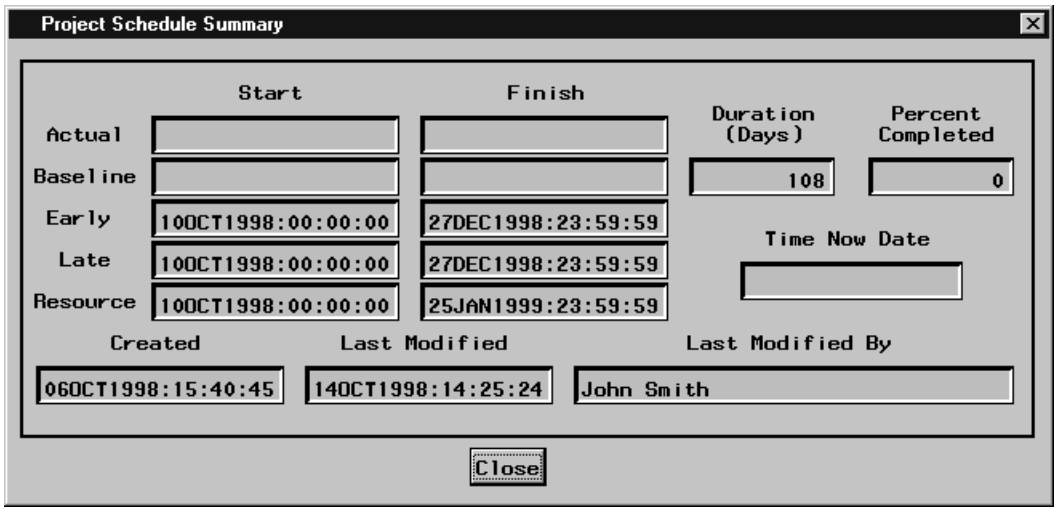
Summary

When this button is pressed, the Project Schedule Summary window is opened. For information on this window, see the "Project Schedule Summary Window" section on page 691.

Project Schedule Summary Window

This window displays summary information for the different project schedules that have been computed. In addition to the start and finish times for these schedules, the duration and the percent completion of the project are also displayed. Note that these values correspond to the Resource Schedule of the project if resource-constrained scheduling was performed; otherwise, they correspond to the Early Schedule of the project.

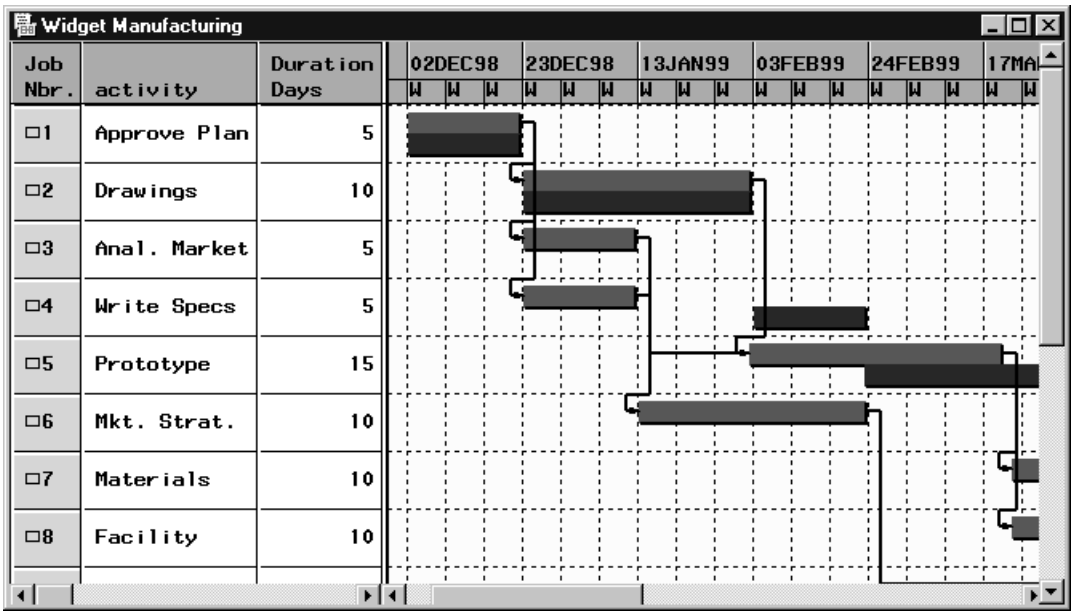
This window also indicates the dates when the project was created and last modified as well as the user that last modified the project.



PM Window

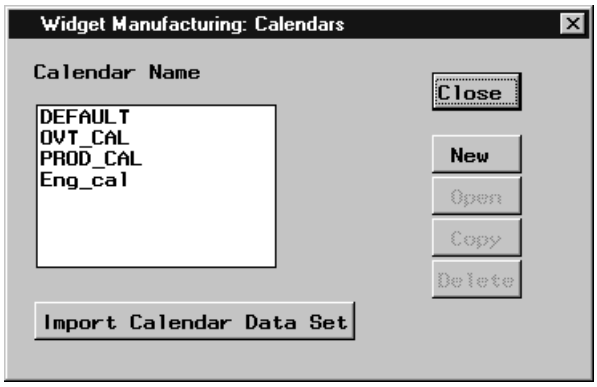
The PM window (also referred to as the Activities window) is an interactive Gantt chart window provided by the PM procedure. Within Projman, this window is used to manipulate data corresponding to the project activities. This data includes names, durations, precedence relationships, calendars, resource requirements, progress information, and baseline schedules, as well as user-defined identification fields.

While the PM window is open, all other Projman application windows are inactive. To access options that control the manner in which the PM window schedules activities, press the Options button on the Project Information window before opening the PM window. For additional information on the PM window, see Chapter 6, "The PM Procedure."



Calendars Window

The Calendars window lists all of the calendars that have been defined for the project. From this window, you can create, edit, copy, and delete calendar definitions. Once defined, calendars can be assigned to activities as well as resources. You can define as many individual calendars as you want. Note that some actions in this window are disabled if they are not valid.



New

When this button is pressed, a new calendar is created and displayed in an Edit Calendar window for editing.

Copy

When this button is pressed, the selected calendar is copied and displayed in an Edit Calendar window for editing. If no calendar is selected, this option is disabled.

Open

When this button is pressed, the selected calendar is displayed in an Edit Calendar window for editing. If no calendar is selected, this option is disabled.

Delete

When this button is pressed, the selected item in the calendar list is deleted. A secondary window is opened to confirm the deletion. Deletions are irreversible unless the project is closed without saving the current changes. If no calendar is selected, this option is disabled.

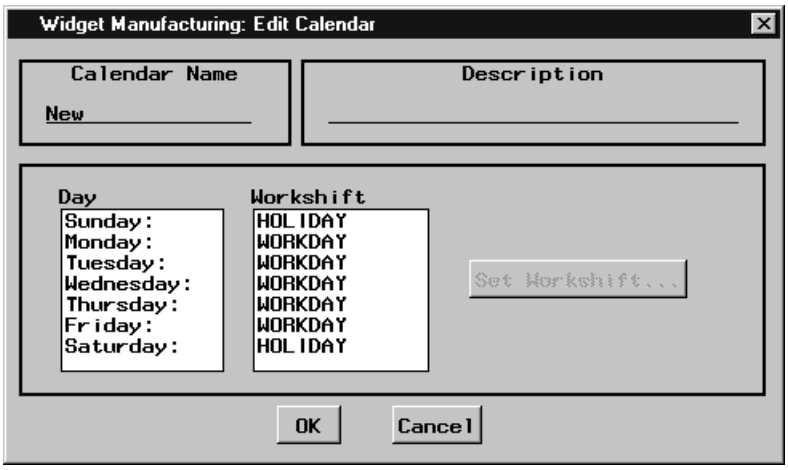
Import Calendar Data Set

When this button is pressed, a window is displayed for importing a CALENDAR data set. For information on this window, see the "Import Calendar Data Set Window" section on page 745. The import data set is required to be in the format appropriate for input to the CPM or PM procedure. For information on the CALENDAR data set, see the "CALEDATA Data Set" section on page 98.

Edit Calendar Window

This window enables you to create and modify calendar definitions. You can specify a calendar name and description as well as choose the workshifts for each day of the work week.

Calendar names can take either character or numeric values, but they must be unique. If a calendar is defined with the name Default, every activity in the project will follow that calendar unless the activity has a specific calendar associated with it.



Name

The Name field is used to specify the name of the calendar. The calendar name can be either character or numeric, but it must be unique. This name is the value that will be used to assign calendars to activities and resources. A longer description can be given in the Description field.

Description

The Description field enables you to store a short description about the calendar. A description is purely optional and is used for identification purposes only.

Workshift Table

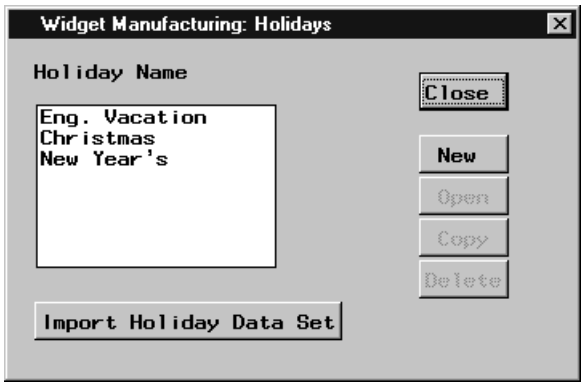
The Workshift table indicates the workshifts that have been assigned to each day of the week. By default, Monday through Friday are working days (identified by the WORKDAY workshift), while Saturday and Sunday are nonworking days (identified by the HOLIDAY workshift). To change the workshift associated with a particular day or days, simply select that day (days) by selecting the corresponding workshift (workshifts) in the table and press the Set Workshift... button.

Set Workshift...

When the Set Workshift... button is pressed, a window is opened that displays all of the workshifts currently defined for the project. By selecting different workshifts, you can change the highlighted values in the Workshift table. When the desired selection has been made, press the Close button to close the window.

Holidays Window

The Holidays window lists all of the holidays that have been defined for the project. From this window, you can create, edit, copy and delete holiday definitions. You can define as many individual holidays as you want. Note that some actions in this window are disabled if they are not valid.



New

When this button is pressed, a new holiday is created and displayed in an Edit Holiday window for editing.

Copy

When this button is pressed, the selected holiday is copied and displayed in an Edit Holiday window for editing. If no holiday is selected, this option is disabled.

Open

When this button is pressed, the selected holiday is displayed in an Edit Holiday window for editing. If no holiday is selected, this option is disabled.

Delete

When this button is pressed, the selected item in the holiday list is deleted. A secondary window is opened to confirm the deletion. Deletions are irreversible unless the project is closed without saving any changes. If no holiday is selected, this option is disabled.

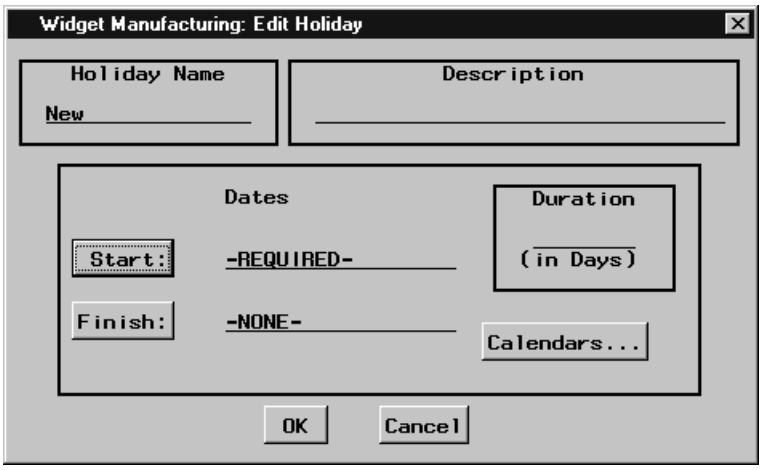
Import Holiday Data Set

When this button is pressed, a window is displayed for importing a HOLIDAY data set. For information on this window, see the "Import Holiday Data Set Window" section on page 746. The import data set is required to be in the format appropriate for input to the CPM or PM procedure. For information on the HOLIDAY data set, see the "HOLIDATA Data Set" section on page 99.

Edit Holiday Window

This window enables you to create and modify holiday definitions. You can specify a holiday name and description as well as a start date, finish date, and the duration (or length) of the holiday. Additionally, you can indicate the calendar or calendars that the holiday is to be associated with.

Holiday names can take either character or numeric values. A start date is always required when defining a holiday.



Name

The Name field is used to specify the name of the holiday. The holiday name can be either character or numeric. A longer description can be given in the Description field.

Description

The Description field enables you to store a short description about the holiday. A description is purely optional and is used for identification purposes only.

Holiday Start Date

The Holiday Start Date field is used to indicate the calendar date that represents the start of the holiday. The start date is required. The value can be entered with either a DATEw. (that is, 01MAY1998) or a DATETIMEw. (that is, 01MAY1998:08:30:00) format. Alternatively, by pressing the Start: button, you can access an Edit Date window to specify the desired value.

Holiday Finish Date

The Holiday Finish Date field can be used to indicate the calendar date that represents the finish of the holiday. The finish date is not required; however, if not specified, the holiday will last only one duration unit (as defined for the project) unless the length of the holiday is specified in the Holiday Duration field. The finish date value can be entered with either a DATEw. (that is, 01MAY1998) or a DATETIMEw. (that is, 01MAY1998:16:59:59) format. Alternatively, by pressing the Finish: button, you can access an Edit Date window to specify the desired value.

Holiday Duration

The Holiday Duration field can be used to specify the length of the holiday. Duration values are specified in the units of the project's duration unit. The duration is optional, but it is assumed to be 1 if the holiday finish date is not provided. If the holiday finish date is specified, the duration is ignored.

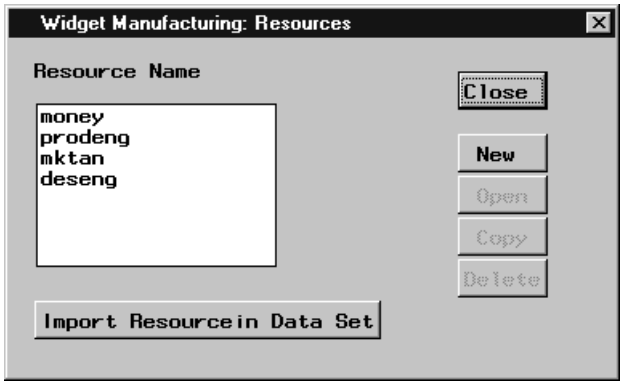
Calendars...

Pressing the Calendars... button opens a window for indicating which project calendar or calendars the holiday is to be associated with. If no calendars are specified in the list, the holiday is assigned to ALL calendars.

The Calendars window contains a list of calendars that the current holiday is assigned to. To remove calendars, simply select the calendar to be removed and press the Remove button. To add calendars to the list, press the Add button. A list of all calendars is displayed and if you select individual calendar entries, they are added to the holiday's calendar assignments.

Resources Window

The Resources window lists all of the resources that have been defined for the project. From this window, you can create, edit, copy and delete resource definitions. You can define as many individual resources as you want. Note that some actions in this window are disabled if they are not valid.



New

When this button is pressed, a new resource is created and displayed in an Edit Resource window for editing.

Copy

When this button is pressed, the selected resource is copied and displayed in an Edit Resource window for editing. If no resource is selected, this option is disabled.

Open

When this button is pressed, the selected resource is displayed in an Edit Resource window for editing. If no resource is selected, this option is disabled.

Delete

When this button is pressed, the selected item in the resource list is deleted. A secondary window is opened to confirm the deletion. Deletions are irreversible unless the project is closed without saving any changes. If no resource is selected, this option is disabled.

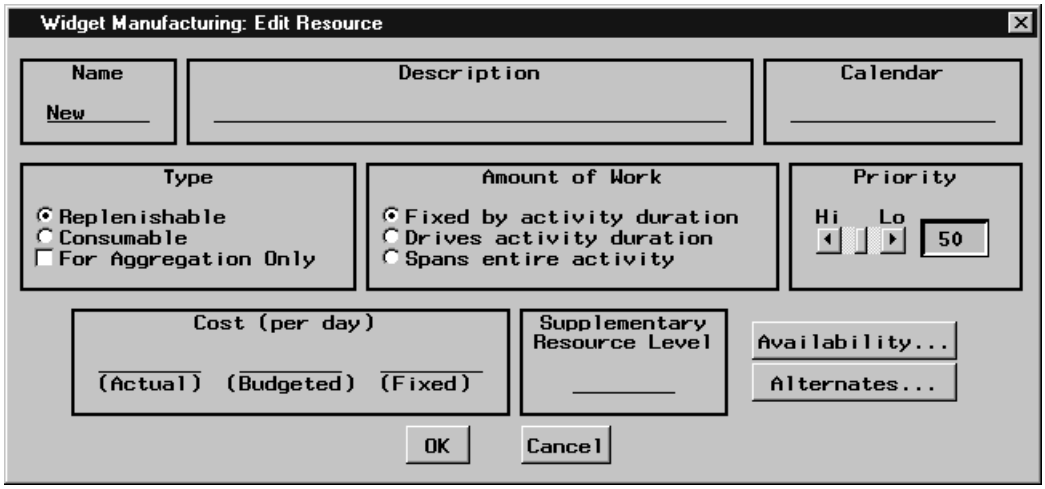
Import Resourcein Data Set

When this button is pressed, a window is displayed for importing a RESOURCEIN data set. For information on this window, see the "Import Resourcein Data Set Window" section on page 747. The import data set is required to be in the format appropriate for input to the CPM or PM procedure. For information on the RESOURCEIN data set, see the "RESOURCEIN= Input Data Set" section on page 107.

Edit Resource Window

This window enables you to create and modify resource definitions. You can specify a resource name and description as well as indicate the resource type and priority. Also, actual, budgeted, and fixed resource costs can be specified. In two secondary windows, you can define the availability profile and a list of substitute resources.

Resource names must be valid SAS names and must be unique.



Name

The Name field is used to specify the name of the resource. The resource name must be a valid SAS name and must be unique. A longer description can be given in the Description field.

Description

The Description field enables you to store a short description of the resource. A description is purely optional and is used for reporting purposes only.

Calendar Name

The Calendar Name field is used to specify the name of the calendar for the resource. Simply type the name of the desired calendar in the field and press Enter. If that calendar does not exist, you are asked if you would like for it to be created. If you respond affirmatively, a calendar (with default settings) is created and given the specified name. Calendars are modified by accessing the Calendars window for the project. For more information, see the "Calendars Window" section on page 693.

Resource Type

Resources are classified as either consumable or replenishable. A consumable resource is one that is used up by the job (such as bricks or money), while a replenishable resource becomes available again once a job using it has finished (such as laborers or machinery).

If the For Aggregation Only option is selected, this resource is used for aggregation rather than resource-constrained scheduling. For more information on aggregation, consult the glossary on page 751. When a resource is defined as an aggregate resource, resource availability information is ignored.

Amount of Work

This selection indicates the amount of work that a particular resource is to perform on an activity (or the manner in which the resource affects an activity's duration). When the Fixed by activity duration option is selected, the resource works for a fixed duration, as specified for the activity; in other words, the activity's duration is not affected by changing the rate of the resource used by the activity. The Drives activity duration selection indicates that the activity's work value indicates the total amount of work required by the resource for that activity; such a resource is called a *driving* resource. The Spans entire activity selection indicates that the resource is to be a *spanning* resource; in other words, the resource is required to work throughout the activity's duration, no matter which resource is working on it. For example, an activity might require 10 percent of a "supervisor," or the use of a particular room, throughout its duration. For such an activity, the duration used for the spanning resource is computed after determining the span of the activity for all the other resources.

Resource Priority

You can use the horizontal slider to specify a resource priority value between 1 and 100. Lower numbers indicate higher priority. During resource-constrained scheduling, this number is used to order activities that are waiting for resources when the primary scheduling rule is specified as resource priority. For information on scheduling rules, see the "Scheduling Rules" section on page 711.

Resource Cost

The Resource Cost fields enables you to specify an actual, budgeted, and fixed cost value for each resource. These costs are optional and are used in cost calculations for resource cost reports.

Supplementary Resource Level

The Supplementary Resource Level field can be used to specify an amount of extra resource that is available for use throughout the duration of the project. This extra resource is used only if the activity cannot be scheduled without delaying it beyond its late start time.

Availability...

Pressing the Availability... button opens the Availability window for the current resource. From this window, you can define the availability profile for the resource. For more information, see the "Availability Window" section on page 700.

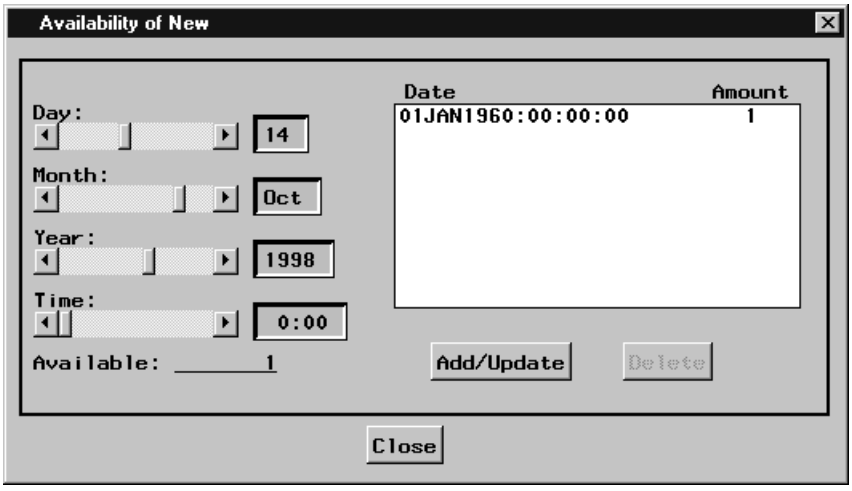
Alternates...

Pressing the Alternates... button opens the Alternates window for the current resource. From this window, you can define alternate (substitute) resources for the current resource. For more information, see the "Alternates Window" section on page 702.

Availability Window

This window enables you to specify the availability profile for the current resource. By adding records to the profile, you can indicate when the resource availability changes over time. By default, one record is added to the list to indicate an initial availability of one unit (on January 1, 1960).

It is only necessary to add records for each change in the availability. Note that, for consumable resources, the availability amount represents the cumulative amount available to date.



Day

The horizontal slider is used to specify the desired day for adding an entry to the availability profile.

Month

The horizontal slider is used to specify the desired month for adding an entry to the availability profile.

Year

The horizontal slider is used to specify the desired year for adding an entry to the availability profile.

Time

The horizontal slider is used to specify the desired time for adding an entry to the availability profile. Note that times are based on a 24 hour clock (that is, 13:00 = 1 PM).

Available

The Available field is used to specify the desired available amount for adding (or updating) an entry to the availability profile.

Availability Profile

The Availability Profile list indicates the amount of resource that is available to the project over time. To add or update records in the list, select the desired date, specify an available amount, and press the Add/Update button. Records in the list are sorted automatically by date. To delete records from the list, select the desired records and press the Delete button.

Add/Update

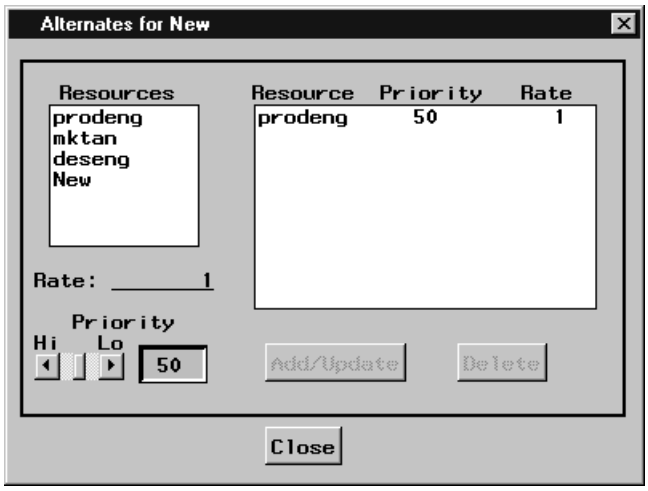
Pressing the Add/Update button adds or updates a record in the availability profile depending on the current date setting and the available amount specified. Records in the availability profile are sorted automatically by date.

Delete

Pressing the Delete button removes the currently selected records in the availability profile. Note that deletions cannot be aborted unless changes to the resource are not saved.

Alternates Window

This window enables you to specify the alternates profile for the current resource. By adding records to the profile, you can indicate which resources and at what rate those resources can be substituted for the current resource. Alternate resources are purely optional, but they can be very helpful in reducing resource infeasibilities. Only resources of the same type (consumable or replenishable) can be substituted for one another.



Resources List

The Resources list contains all of the resources defined for the project that are of the same type (replenishable or consumable) as the current resource, as substitutions can only be made by like-typed resources. Selecting one or more resources in this list enables you to add records to the alternates profile.

Rate

The Rate field is used to specify the rate of substitution for an alternate resource specification. For example, if resource Z is to be substituted for resource X with a substitution rate of 0.5, an activity that requires 1 unit of resource X could be completed with 0.5 units of resource Z.

Priority

The horizontal slider can be used to indicate a priority for an alternate resource specification. Lower numbers indicate higher priority. This priority is used to order the resources that are listed as alternates (substitutes) for the current resource.

Alternates Profile

The Alternates Profile indicates the resources that are eligible to be substituted for the current resource (if it should be unavailable during project scheduling). Records in this list are ordered by priority to indicate the order in which substitutions would be made (if needed). To add or update records in the list, select one or more resources in the Resources list, specify the rate of substitution and the priority, and press the Add/Update button. To delete records from the list, select the desired records and press the Delete button.

Add/Update

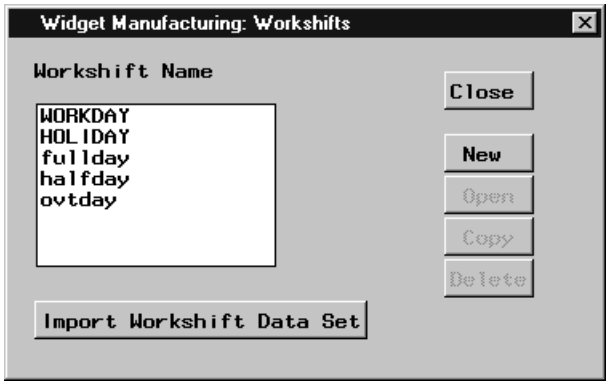
Pressing the Add/Update button adds or updates a record in the alternates profile depending on the current resource, rate, and priority settings.

Delete

Pressing the Delete button removes the currently selected records in the alternates profile. Note that deletions cannot be aborted unless changes to the resource are not saved.

Workshifts Window

The Workshifts window lists all of the workshifts that have been defined for the project. From this window, you can create, edit, copy, and delete workshift definitions. You can define as many individual workshifts as you want. Note that some actions in this window are disabled if they are not valid.



New

When this button is pressed, a new workshift is created and displayed in an Edit Workshift window for editing.

Copy

When this button is pressed, the selected workshift is copied and displayed in an Edit Workshift window for editing. If no workshift is selected, this option is disabled.

Open

When this button is pressed, the selected workshift is displayed in an Edit Workshift window for editing. If no workshift is selected, this option is disabled.

Delete

When this button is pressed, the selected item in the workshift list is deleted. A secondary window is opened to confirm the deletion. Deletions are irreversible unless the project is closed without saving any changes. If no workshift is selected, this option is disabled.

Import Workshift Data Set

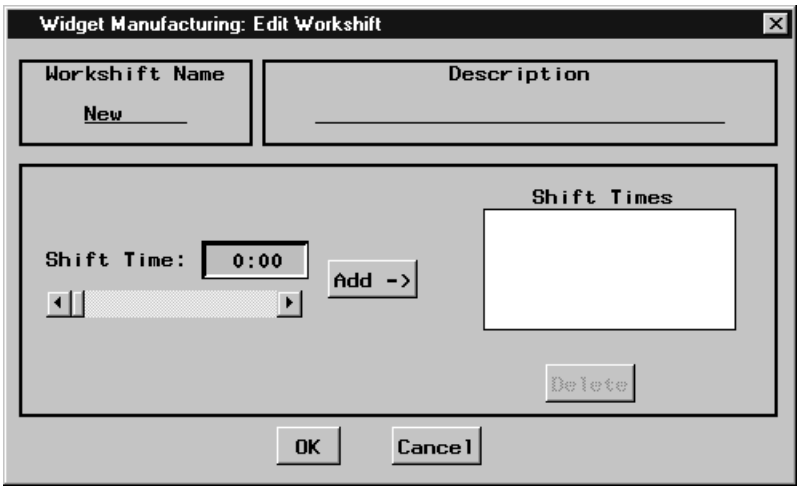
When this button is pressed, a window is displayed for importing a WORKSHIFT data set. For information on this window, see the “Import Workshift Data Set Window” section on page 748. The import data set is required to be in the format

appropriate for input to the CPM or PM procedure. For information on the WORKDAY data set, see the "WORKDATA Data Set" section on page 97.

Edit Workshift Window

This window enables you to create and modify workshift definitions. You can specify a workshift name and description as well as define the on/off working times that make up the valid working periods within a single day.

Workshift names must be valid SAS names and must be unique.



Name

The Name field is used to specify the name of the workshift. The workshift name must be a valid SAS name and must be unique. A longer description can be given in the Description field.

Description

The Description field enables you to store a short description of the workshift. A description is purely optional and is used for identification purposes only.

Shift Time

The horizontal slider can be used to adjust the shift time. When the Add -> button is pressed, this value is added to the Shift Times list. The values in the Shift Times list are sorted automatically. Note that times are based on a 24 hour clock (that is, 13:00 = 1 PM).

Add ->

When this button is pressed, the current shift time value is added to the Shift Times list. The values in the Shift Times list are sorted automatically.

Shift Times List

The Shift Times list contains the on/off working times that represent the workshift (workday) definition. Times can be added to the list by setting the Shift Time and pressing the Add -> button, while times are removed by selecting items in the list and pressing the Delete button. Times should be added to the Shift Times list in pairs that represent on/off working times. A valid workshift will have an even number of times in the list.

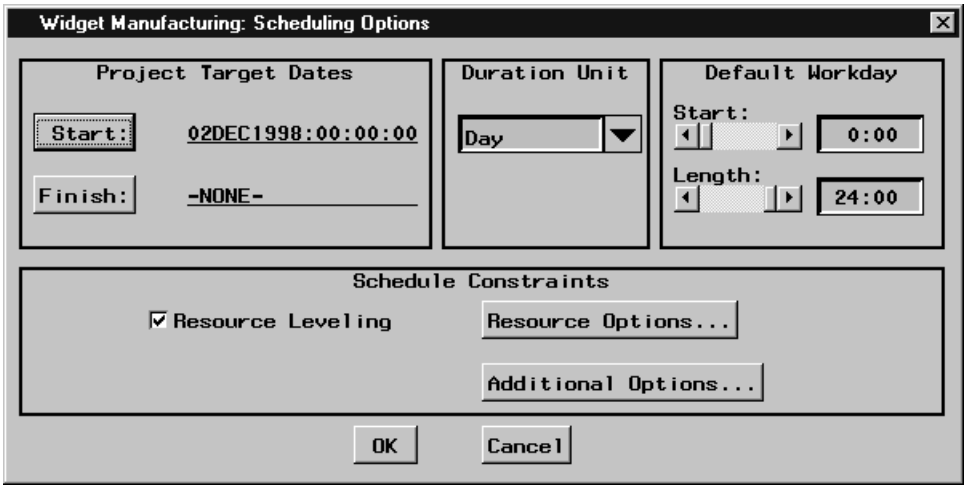
Delete

When this button is pressed, any times selected in the Shift Times list are deleted.

Schedule Options Window

This window enables you to set options that control the scheduling of the active project using the critical path method. These options are maintained separately for each project, and default values depend upon the data specified for the project. Schedule Constraints (such as resource leveling) can be enabled and disabled here. Secondary windows can be used to set additional options that are used to provide tighter control over the scheduling algorithm.

Some options are not available unless certain project data has been specified. For example, if no resources are defined, the Resource Leveling option is disabled. However, when resources are added to the project, this option is automatically enabled and selected.



Project Start Date

The Project Start Date is used to align the start of the project. This value can be entered with either a DATEw. (that is, 01MAY1998) or a DATETIMEw. (that is, 01MAY1998:08:30:00) format. Alternatively, by pressing the Start: button, you can access an Edit Date window to specify the desired value.

A project finish date can also be specified. If neither of these dates is specified, the project start date is automatically set to the current date upon initial scheduling.

Project Finish Date

The Project Finish Date is used to align the finish of the project. This value can be entered with either a DATEw. (that is, 01MAY1998) or a DATETIMEw. (that is, 01MAY1998:17:00:00) format. Alternatively, by pressing the Finish: button, you can access an Edit Date window to specify the desired value.

A project start date can also be specified. If neither of these dates is specified, the project start date is automatically set to the current date upon initial scheduling.

Duration Unit

The duration unit specifies the unit of time for the duration of each activity in the project. The following choices are available:

Second	Week
Minute	Month
Hour	Qtr
Day	Year
Weekday	

The default value is Day.

Workday Start

This option can be used to specify the start of the default workday. Values for this option correspond to a TIME5. (hh:mm) value, where hh is in hours and mm is in minutes. Use the horizontal slider to select the desired value. Note that times are based on a 24 hour clock (that is, 13:00 = 1 PM).

This option is ignored when the duration unit is specified as Month, Qtr, or Year.

Workday Length

This option can be used to specify the length of the default workday. Values for this option correspond to a TIME5. (hh:mm) value, where hh is in hours and mm is in minutes. Use the horizontal slider to select the desired value.

This option is ignored when the duration unit is specified as Month, Qtr, or Year.

Resource Leveling

The Resource Leveling option is used to indicate that the activities in the project are to be scheduled subject to the availability of required resources. If the active project contains resource data, this option is selected by default; otherwise, the option is disabled. To schedule a project without using resource constraints, simply deselect the Resource Leveling option.

Resource Options...

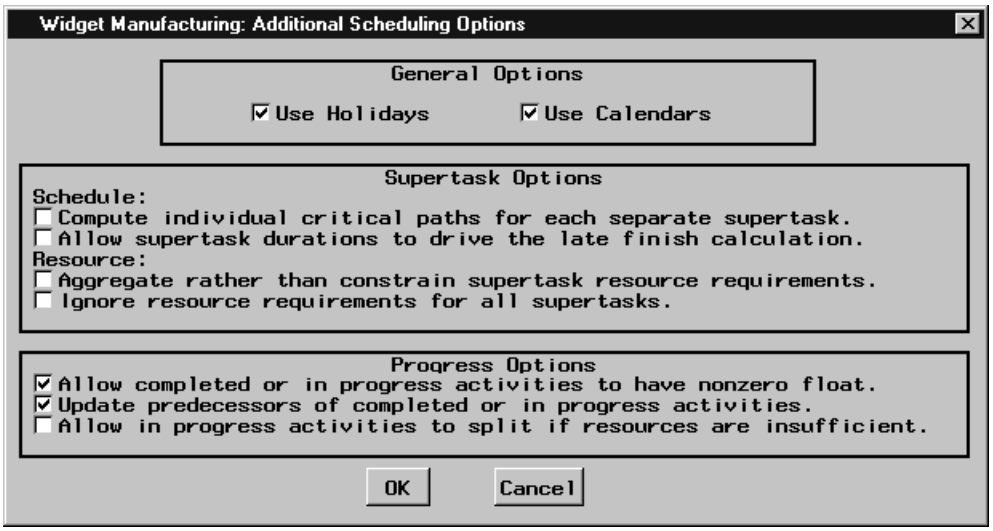
Pressing this button opens the Resource Options window, which is used to set options to control the resource allocation algorithm. For more information on this window, see the “Resource Options Window” section on page 709.

Additional Options...

Pressing this button opens the Additional Options window, which is used to set basic options that control the project scheduling algorithm. For more information on this window, see the “Additional Options Window” section, which follows.

Additional Options Window

This window enables you to control general scheduling options, such as the use of holidays and calendars. There are also controls for supertask and progress options. Note that some of these options are disabled if the required project data are not present. The settings of these options are established and maintained for each project.



Additional Options

Use Holidays

When this option is activated, holiday definitions are considered during scheduling; otherwise, all holidays are ignored. Note that this option is disabled if no holidays have been defined. This option is automatically activated when holidays are initially created.

Use Calendars

When this option is activated, calendar definitions are considered during scheduling; otherwise, all calendars are ignored. Note that this option is disabled if no calendars have been defined. This option is automatically activated when calendars are initially created.

Compute individual critcal paths for each separate supertask.

When this option is selected, the scheduling algorithm calculates a separate critical path for each supertask in the project.

By default, the project's early finish time is treated as the starting point for the calculation of the backward pass (which calculates the late start schedule). The late finish time for each supertask is then determined during the backward pass on the basis of the precedence constraints. If a target date is placed on the finish time of a supertask, the late finish time of the supertask is further constrained by this value. However, when this option is activated, the scheduling algorithm requires that the late finish time of each subtask be less than or equal to the early finish time of the supertask.

Allow supertask durations to drive the late finish calculation.

When this option is activated, the scheduling algorithm uses the specified supertask duration to compute the maximum allowed late finish for each supertask. Otherwise, the maximum allowed late finish time is determined by the supertask span, as computed from the span of all the subtasks of the supertask.

Aggregate rather than constrain supertask resource requirements.

When this option is selected, the resource requirements for all supertasks are used only for aggregation purposes and not for resource-constrained scheduling.

Ignore resource requirements for all supertasks.

When this option is activated, the resource requirements for all supertasks are ignored.

Allow completed or in-progress activities to have nonzero float.

When this option is selected, the scheduling algorithm allows activities that are completed or in progress to have nonzero float. For more information on float, see total float and free float in the glossary on page 751. By default, all completed or in-progress activities have zero float.

Update predecessors of completed or in-progress activities.

When this option is selected, the scheduling algorithm assumes automatic completion (or start) of activities that are predecessors to activities already completed (or in progress). For example, if activity B is a successor of activity A, and B has an actual start time (or actual finish time or both) specified while A has no actual start or actual finish time, then the algorithm assumes that A must have already finished. Activity A is assigned an actual start time and an actual finish time consistent with the precedence constraints.

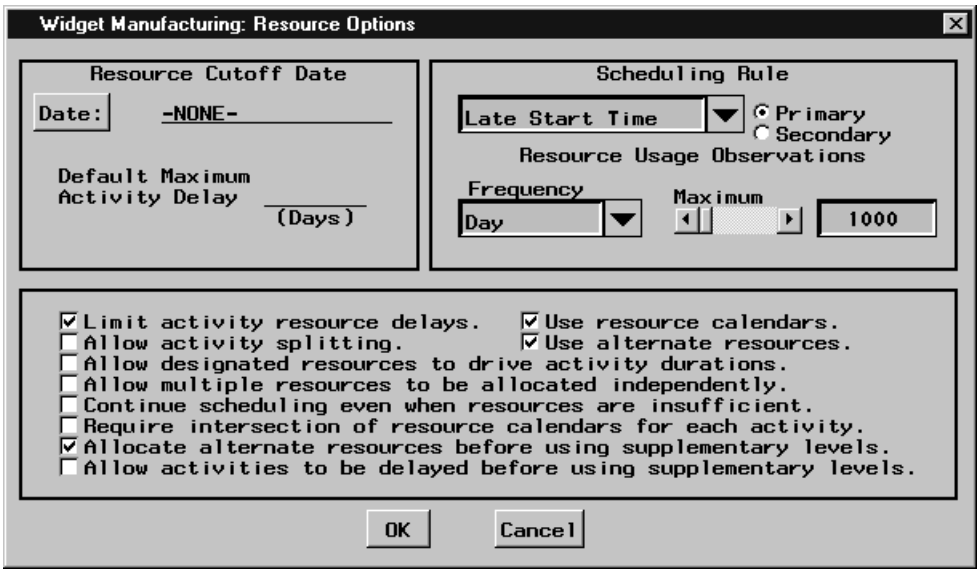
Allow in-progress activities to split if resources are insufficient.

When this option is activated, the scheduling algorithm allows activities that are in progress at the time now date to be split if they cause resource infeasibilities. During resource allocation, any activities with early start values less than the time now date are scheduled even if there are not enough resources. This is true even for activities that are in progress. This option permits an activity to be split into two segments at the time now date, allowing the second segment of the activity to be scheduled later when resource levels permit. Note that activities with a target date alignment type of mandatory start or mandatory finish are not allowed to be split; also, activities without resource requirements are not split.

Resource Options Window

The Resource Options window enables you to control several aspects of the resource scheduling algorithm. When activities are scheduled subject to the limited availability of resources, it is quite possible that a feasible schedule does not exist or cannot be found. The resource options available here can be used to control and manipulate the resource allocation process. In some cases, these options might enable the algorithm to find a feasible schedule or to shorten the existing schedule.

These options settings are established and maintained for each project. Note that some options have no effect if the appropriate data has not been specified.



Resource Options

Resource Cutoff Date

The Resource Cutoff Date field can be used to specify a cutoff date for resource leveling. When this date is specified, the scheduled start and finish for activities that would occur after the cutoff date are set to missing (empty). This value can be entered with either a DATEw. (that is, 01MAY1998) or a DATETIMEw. (that is, 01MAY1998:17:00:00) format. Alternatively, by pressing the Date: button, you can access an Edit Date window to specify the desired value.

Maximum Activity Delay

The Maximum Activity Delay field can be used to specify the maximum amount of time by which any activity in the project can be delayed due to lack of resources. This value acts as a default for all project activities, while individual values can be specified for each separate activity. The default value for this option is +INFINITY.

Resource Usage Observations

The maximum number of resource observations sets an upper limit on the number of observations that the resource usage output data set can contain. The default value is 1000. Use the horizontal slider to increase this limit. The frequency indicates the time interval at which observations are added to the data set. Use the combo box to select the desired time interval.

Limit activity resource delays.

When this option is activated, the maximum activity delay and each activity's delay values (if specified) are used to control activity schedule slippage when performing resource leveling; otherwise, the values are ignored and activity schedules are allowed to slip indefinitely.

Use resource calendars.

When this option is activated, resource calendars (if specified) are used to determine on/off work periods for resources; otherwise, all resource calendars are ignored.

Allow activity splitting.

When this option is activated, activities are allowed to be split into segments during resource allocation. The maximum number of segments and the minimum segment duration can be specified for each activity to control the extent of the splitting.

Use alternate resources.

When this option is activated, alternate resources (if specified) are used; otherwise, they are ignored.

Allow designated resources to drive activity durations.

This option is used to activate resource-driven durations, provided that resources have been defined as *driving* resources and work rates have been specifed for the activities.

Allow multiple resources to be allocated independently.

When this option is selected, each resource can be scheduled separately for each activity during resource allocation; otherwise, all resources (required by an activity) must be available before work on the activity can be scheduled. If this option is selected, each resource is scheduled independently of the others. This may cause an activity's schedule to be extended if its resources cannot all start at the same time.

Continue scheduling even when resources are insufficient.

When this option is selected, the scheduling algorithm continues to schedule activities even when resources are insufficient. By default, the algorithm stops (with a partial schedule) when it cannot find sufficient resources for an activity before the activity's latest possible start time (accounting for the activity's delay value or the maximum activity delay and using supplementary or alternate resources if necessary and if allowed). This option is equivalent to specifying infinite supplementary levels for all resources under consideration.

Require intersection of resource calendars for each activity.

When this option is selected, an activity can be scheduled only during periods that are common working times for all resource calendars (corresponding to the resources used by that activity) and the activity's calendar. Use this option with caution; if an activity uses resources that have mutually disjoint calendars, that activity can never be scheduled.

If this option is not specified and resources have independent calendars, then each resource is scheduled using its own calendar. Thus, an activity can have one resource working on a five-day calendar, while another resource is working on a seven-day calendar.

Allocate alternate resources before using supplementary levels.

This option indicates that the scheduling algorithm is to check for alternate resources before using supplementary resources. When this option is not selected, the algorithm uses supplementary levels first (if available) and alternate resources are used only if the supplementary levels are not sufficient.

Allow activities to be delayed before using supplementary levels.

When this option is selected, the scheduling algorithm waits until an activity's late start plus delay before it is scheduled using a supplementary level of resources. Otherwise, even if an activity has a nonzero value specified for delay, it can be scheduled using supplementary resources before late start plus delay.

Scheduling Rules

The primary scheduling rule is used to order the list of activities whose predecessor activities have been completed while scheduling activities subject to resource constraints. The secondary scheduling rule is used to break ties caused by the primary scheduling rule. The scheduling rule choices are

Activity Priority	Late Finish Time
Delayed Late Start	Resource Priority
Late Start Time	Shortest Duration

The default primary scheduling rule is Late Start Time, while the default secondary scheduling rule is Shortest Duration.

Activity Priority

The Activity Priority scheduling rule specifies that activities in the waiting list (for resources) should be sorted in the order of increasing values of their priority.

Delayed Late Start

The Delayed Late Start scheduling rule specifies that activities in the waiting list (for resources) should be sorted in the order of increasing values of their late start plus their delay.

Late Start Time

The Late Start Time scheduling rule specifies that activities in the waiting list (for resources) should be sorted in the order of increasing values of their late start.

Late Finish Time

The Late Finish Time scheduling rule specifies that activities in the waiting list (for resources) should be sorted in the order of increasing values of their late finish.

Resource Priority

The Resource Priority scheduling rule specifies that activities in the waiting list (for resources) should be sorted in the order of increasing values of the resource priority for the most important resource used by each activity. In other words, the resource priorities are used to assign priorities to the activities in the project; these activity priorities are then used to order the activities in the waiting list (in increasing order).

Shortest Duration

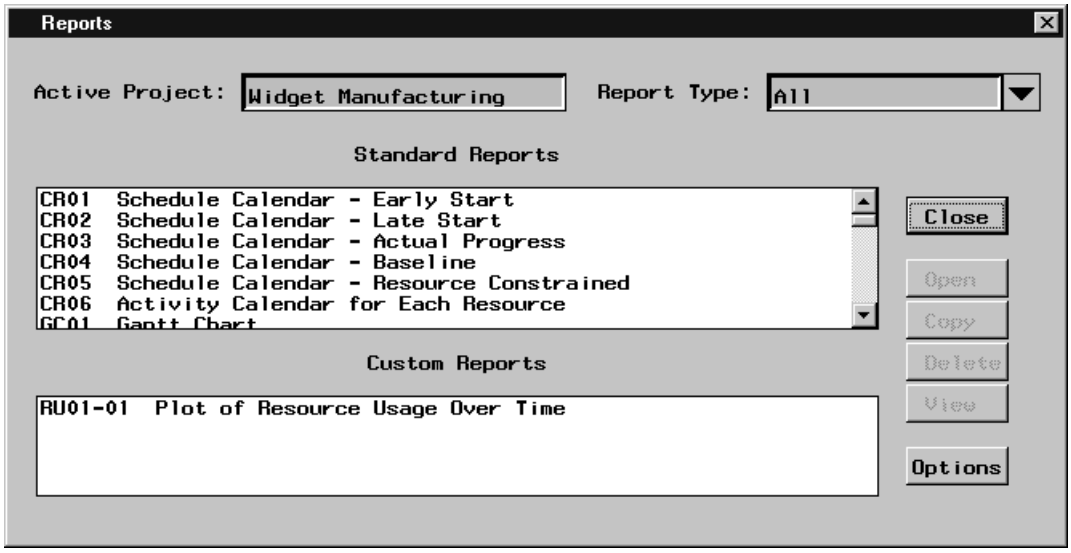
The Shortest Duration scheduling rule specifies that activities in the waiting list (for resources) should be sorted in the order of increasing values of their durations.

Reports Window

The Reports window displays a list of all project reports defined to the Projman application. Reports are divided into two categories, Standard and Custom. Standard reports are included with the application and cannot be modified or deleted. You can copy and modify standard reports to create custom reports, which can be copied, modified, and deleted.

Reports are grouped according to type. The following types are available:

Calendars	Resource Schedule
Gantt Charts	Resource Usage
Network Diagrams	Tabular
Resource Cost	



You can define as many different reports as you would like. Reports are designed to work with any project provided that the necessary data are available. Individual report options can be set by accessing the Options window for a particular report. For more information, see the “Options Window” section on page 717.

Global report options can be set by accessing the Report Options window. These options include the setting of default color and fonts as well as the specification of report titles and footnotes. For more information, see the “Report Options Window” section on page 714.

Active Project

The Active Project indicates the project that is active for the Reports window. When you generate reports, the active project provides the data for the selected report. When multiple projects are open at one time, the active project removes any confusion about which project data are used to produce the report. To change the active project, simply

click on the name of the current project, and a list of open projects is displayed for selection.

Report Type

The Report Type combo box indicates the type of reports that are currently displayed in the window. By default, All reports are initially displayed. For example, you might use this option to specify that only Gantt Chart reports are to be listed in the window. To change the report type, simply click on the combo box, and a list of available report types is displayed.

Standard Reports

This list contains all of the reports (of a particular type or types) that are defined by the Projman application. These standard reports cannot be modified or deleted. To make changes to one of these reports, you must select the desired report and press the Copy button. A copy of the selected report is added to the Custom Reports list. Use the View button to generate a report.

Custom Reports

This list contains all of the reports (of a particular type or types) that have been created by the user. Custom reports are created by copying a report from the list of Standard Reports. These reports can be manipulated by selecting the desired report in the list and pressing the Open, Copy, or Delete buttons. Use the View button to generate a particular report.

Open

When this button is pressed, the selected custom report is displayed in the report's Options window for editing. For more information on that window, see the "Options Window" section on page 717. If no custom report is selected, this option is disabled.

Copy

When this button is pressed, the selected report is copied and displayed in the report's Options window for editing. For more information on that window, see the "Options Window" section on page 717. If no report is selected, this option is disabled.

Delete

When this button is pressed, the selected report in the Custom Reports list is deleted. A secondary window is opened to confirm the deletion. Note that the deletion of reports is irreversible. If no custom report is selected, this option is disabled.

View

When this button is pressed, the currently selected report is generated. If no report is selected, the option is disabled. Note that when modifying a specific custom report, you can view the report to verify the results before saving the current changes.

Options

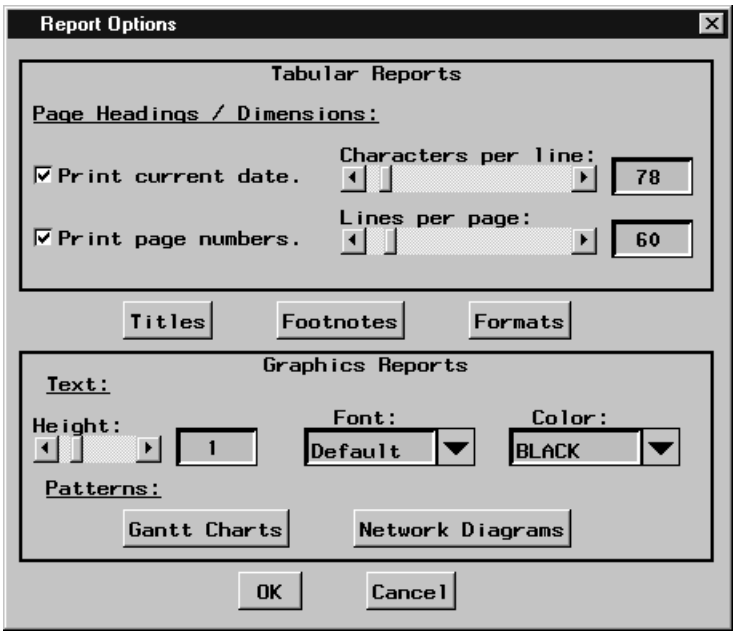
When this button is pressed, the Report Options window is displayed. From that window, you can control general options that affect all project reports. For more information, see the "Report Options Window" section on page 714.

Close

When this button is pressed, the window is closed. Also, all individual report Options windows (which are currently open) are closed.

Report Options Window

The Report Options window provides access to various options for both tabular and graphic quality reports. You can modify output appearance features such as page headings, titles, and footnotes as well as colors and fonts. These options affect all reports generated with the Projman application.



Tabular Report Options

Print current date.

When this option is selected, the current date is displayed in the upper-right corner of each page of all tabular (nongraphics quality) reports.

Print page numbers.

When this option is selected, page numbers are displayed in the upper-right corner of each page of all tabular (nongraphics quality) reports.

Characters per line

The horizontal slider can be used to specify the width of pages of tabular (nongraphics quality) reports. The number of characters per line must be an integer value between 64 and 256.

Lines per page

The horizontal slider can be used to specify the length of pages of tabular (nongraphics quality) reports. The number of lines per page must be an integer value between 15 and 512.

Titles

When the Titles button is pressed, a window is displayed for specifying one or more titles for project reports. You can customize any of your output from reports by adding up to four titles to the top of each page.

To create or modify a title, simply press the button corresponding to the title you want to modify. For each title, you can specify the type, color, and size of the font as well as the justification used to align the text. Note that the type, color, size, and justification specifications are used only when producing graphics-quality reports. For more information, see the "Title Window" section on page 716.

Footnotes

When the Footnotes button is pressed, a window is displayed for specifying one or more footnotes for project reports. You can customize any of your output from reports by adding up to four footnotes to the bottom of each page.

To create or modify a footnote, simply press the button corresponding to the footnote you want to modify. For each footnote, you can specify the type, color, and size of the font as well as the justification used to align the text. Note that the type, color, size, and justification specifications are used only when producing graphics-quality reports. For more information, see the "Footnote Window" section on page 716.

Formats

When the Formats button is pressed, a window is displayed for selecting the format to be used for displaying project schedules. You can specify whether reports are to display schedules using a DATE7. (that is, 01MAY98) or a DATETIME13. (that is, 01MAY98:12:00) format.

Graphics Report Options

Height

The horizontal slider can be used to specify the default height to be used for all text displayed in graphics-quality reports. The default value is 1, and valid values range from 0.1 to 5.

Font

The font combo box can be used to specify the default font to be used for all text displayed in graphics-quality reports.

Color

The color combo box can be used to specify the default color to be used for all text displayed in graphics-quality reports.

Gantt Chart Patterns

Pressing the Gantt Charts button opens a window where you can specify the colors and fill patterns of the activity bars drawn on graphics-quality Gantt charts.

The various types of activity bars, along with their respective colors and fill patterns, are listed in the window. To modify the attributes for a particular activity bar, simply click on the corresponding color or fill pattern, and a selection window is opened. From that window, simply select the desired color or fill pattern.

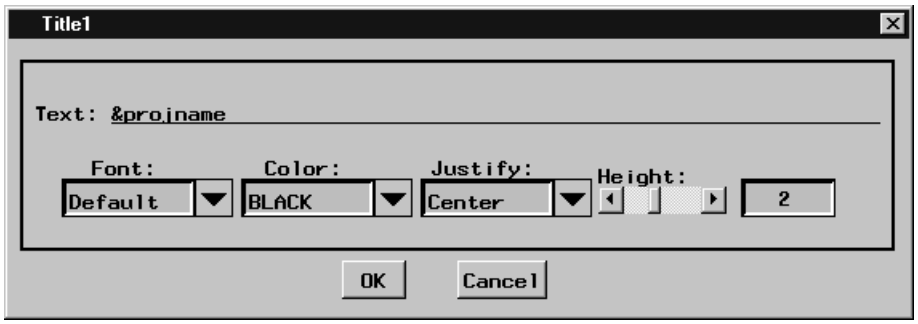
Network Diagram Patterns

Pressing the Network Diagrams button opens a window where you can specify the colors and fill patterns of the activity nodes drawn on graphics-quality network diagram reports.

The various types of activity nodes, along with their respective colors and fill patterns, are listed in the window. To modify the attributes for a particular activity node, simply click on the corresponding color or fill pattern, and a selection window is opened. From that window, simply select the desired color or fill pattern.

Title Window

The Title window is used to modify the attributes of report titles.



Text

The Text field is used to specify the text of the title or footnote. By default, Title1 contains "&projname". When the report is generated, the macro variable, &projname, resolves to the name of the current project. Alternatively, &projdesc can be used to specify the project description.

Font

Use this selection to specify the font used to draw the text of the title or footnote. Note that the font specification is used only when producing graphics-quality reports.

Color

Use this selection to specify the color of the text of the title or footnote. Note that the color specification is used only when producing graphics-quality reports.

Justify

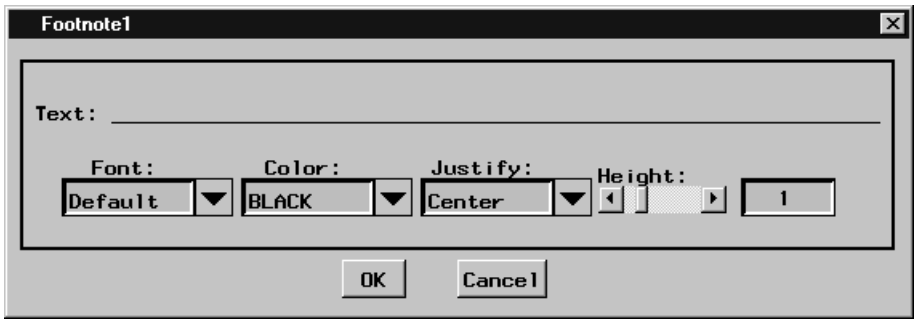
Use this selection to specify whether the text of the title or footnote is to be left-justified, centered, or right-justified on the page. Note that the justification specification is used only when producing graphics-quality reports.

Height

Use this selection to specify the height of the text of the title or footnote. The default height is 1, except for the Title1 (which has a default height of 2). Note that the height specification is only used when producing graphics-quality reports.

Footnote Window

The Footnote window is used to modify the attributes of report footnotes. For descriptions of the options, see the “Title Window” section on page 716.



Options Window

A report's Options window is used to modify the characteristics of a selected report. Options differ depending on the type of report that is being modified. All reports fall into one of the following categories:

- Calendar Reports
- Gantt Charts
- Network Diagrams
- Resource Reports
- Tabular Listings

Standard Options

The following set of options are common to several different types of reports.

Id

The Id field displays a unique identifier label for the report. This label cannot be modified.

Name

The Name field can be used to provide a name for the report. The report name is used for identification purposes only.

Identifiers

When this button is pressed, a window is opened to enable you to add selections to the Identifier list. Selections are added to the bottom of the list as they are chosen. Items can be removed from the Identifier list by selecting the desired items and pressing the Remove button.

Identifier List

The Identifier list contains the list of variables that have been selected to provide identifying information for the report. For instance, the values of these variables are used to identify (highlight) records in a tabular report or activity bars on a Gantt chart. Use the Identifiers button to add items to this list.

Sub-Groups

When this button is pressed, a window is opened to enable you to add selections to the Sub-Group list. Selections are added to the bottom of the list as they are chosen.

Items can be removed from the Sub-Group list by selecting the desired items and pressing the Remove button.

Sub-Group List

The Sub-Group list contains the list of variables that have been selected to provide grouping information for the report. For instance, like values of these variables are used to group records in a tabular report for separate analysis. Similarly, like values of these variables divide activities into groups for display on separate Gantt charts. Note that this separation (and any necessary sorting) is done automatically. Use the Sub-Groups button to add items to this list.

Remove

When this button is pressed, highlighted selections in the Identifier and Sub-group lists are deleted.

OK

If you press the OK button, the current values displayed in the window are stored and the window is closed.

Cancel

If you press the Cancel button, all values displayed in the window are returned to their original values (as when the window was opened) and the window is closed.

View

When this button is pressed, the report is generated. This option is very useful for testing modifications to a report before actually saving the changes.

Edit Source...

When this button is pressed, a window is displayed for modifying the report source code. Changes to the source code should be made with care as incorrect changes can disable report options or cause the report to fail entirely. In the Edit Source window, type **ok** on the command line to save changes and **cancel** to cancel.

Macro Variables

This section describes the SAS macro variables that are defined by the Projman application during report generation. Many of these macro variables are used in the SAS source code provided with the standard reports. When you modify the source code of custom reports, this information may be helpful.

Standard Macro Variables

Name	Contents	Explanation
&reptname	'report name'	Current report name
&projname	'project name'	Active project name
&projdesc	'project description'	Active project description
&rdformat	datetime7. OR datetime13.	specified by the Formats option
&varlist	'Variables variable names'	specified by the Variable list
&ivarlist	'Identifier variable names'	specified by the Identifier list
&byvlist	BY + 'Sub-Group variable names'	specified by the Sub-Group List

Calendar Reports

Name	Contents	Explanation
&start	'start variable name'	specified by the Schedule option
&finish	'finish variable name'	finish corresponding to &start
&calopts	header=Small, Medium, OR Large	specified by the Header Size option
	fill	if Display All Months is selected
	missing	if Include Missing Labels is selected
&caldata	caledata=work.cal workdata= work.shift(drop=holiday workday)	if calendars used in scheduling
	holidata=work.hol	if holidays used in scheduling
&calstmt	calid calid;	if calendars used in scheduling
	outstart monday; outfinish friday;	if Display Weekdays Only is selected
&holstmt	holistart hstart; holidur holidur; holifin hfinish; holiname holiname;	if holidays used in scheduling

Note that the &caldata, &calstmt, and &holstmt macro variables are not defined unless the active project's duration unit is 'DAY' or 'WEEKDAY'.

Gantt Chart Reports

Name	Contents	Explanation
&gout	gout=work.ggseg	graphics catalog specification
&resdict	work.resdict	resource dictionary data set
&zonevar	'variable name'	first variable in Sub-Group List
&res	Lineprinter, Fullscreen OR Graphics	specified by the Resolution option
&gantdata	caledata=work.cal workdata= work.shift(drop=holiday workday)	if calendars used in scheduling
	holidata=work.hol	if holidays used in scheduling
	labeldata=work.labels	if Mark Parent Tasks is selected
	precdata=work.repttemp (where=(obs_type='LOGIC'))	if Show Precedence is selected
&ganopts	mininterval='duration unit'	specified by the Per Interval option
	scale='integer value'	specified by the Columns option
	name="g"	graphics catalog entry name
	maxids	draw maximum number of identifiers
	interval='duration unit'	duration unit used for scheduling
	dur=duration cmile='color'	if Show Milestones is selected
	activity=actid succ=succid lag=lag cprec='color'	if Show Precedence is selected
	noarrowhead	if Suppress Arrowheads is selected
	nojobnum	unless Show Job Numbers is selected
	nolegend	unless Show Chart Legend is selected
	compress	if Compress To One Page is selected
	hconnect chcon='color'	if Draw Task Lines is selected
	critflag	if Flag Critical Tasks is selected
	combine	if Combine Schedules is selected
	labvar=actid	if Mark Parent Tasks is selected
	markwknd	if Mark Weekends is selected
	markbreak	if Mark Work Breaks is selected
	idpages	if Print Id On Each Page is selected
	fill	if Fill Pages Completely is selected
	noframe	if Suppress Chart Frame is selected
	pcompress	if Proportional Compress is selected
	hpages='integer value'	specified by the Horizontal Pages option
	vpages='integer value'	specified by the Vertical Pages option
	height='numeric value'	specified by the Text Height option
	caxis='color'	specified by the Time Axis option
	ctext='color'	specified by the Text option
	cframe='color'	specified by the Chart Frame option
	holiday=(hstart) holidur=(holidur) holifin=(hfinish)	if holidays were used in scheduling
	calid=calid	if calendars were used in scheduling
	timenow='timenow date'	if Draw Timenow Line is selected
	notnlabel	unless Label Timenow Line is selected

Note that the CALEDATA=, HOLIDATA= AND WORKDATA= specifications are not added to the &gantdata macro variable unless the active project's duration unit is larger than 'DAY'.

Network Diagram Reports

Name	Contents	Explanation
&gout	gout=work.ngseg	graphics catalog specification
&res	Lineprinter, Fullscreen OR Graphics	specified by the Resolution option
&netopts	name="n"	graphics catalog entry name
	zone='variable name'	specified by the Zone Variable option
	nozonelabel	if Suppress Zone Labels is selected
	zonespace	if Space Between Zones is selected
	nodefaultid	unless Show Default Vars is selected
	nolabel	unless Label Variables is selected
	duration=duration	if Show Duration is selected
	separatearcs	if Draw Seperate Arcs is selected
	showstatus	if Show Progress is selected
	compress	if Compress To One Page is selected
	centerid	if Center Id Values is selected
	spanningtree	if Spanning Tree Layout is selected
	lag=(lag)	if Show Precedence Type is selected
	rectilinear	if Draw Rectangular Arcs is selected
	pcompress	if Proportional Compress is selected
	arrowhead=0	if Suppress Arrowheads is selected
	noarrowfill	if Draw Open Arrowheads is selected
	nonumber	if Suppress Page Numbers is selected
	hpages='integer value'	specified by the Horizontal Pages option
	vpages='integer value'	specified by the Vertical Pages option
	height='numeric value'	specified by the Text Height option
	carcs='color'	specified by the Arcs option
	ccritarcs='color'	specified by the Critical Arcs option
	ctext='color'	specified by the Node Text option
	frame caxis='color'	if Draw Border is selected
	autozone	if Automatic Zone Layout is selected
	linear	if Draw Linear Time Axis is selected
	autoref cref='color'	if Draw Reference Lines is selected
	refbreak	if Show Ref. Line Breaks is selected
	showbreak	if Show Time Axis Breaks is selected
	notimeaxis	if Suppress Time Axis is selected
	align='schedule variable name'	specified by the Schedule option

Note that the following specifications are not added to the &netopts macro variable unless the Schedule option is specified: FRAME, CAXIS=, LINEAR, AUTOREF, CREF=, REFBREAK, SHOWBREAK, AND NOTIMEAXIS.

Resource Reports

Name	Contents	Explanation
&gout	gout=work.rgseg	graphics catalog specification
&plotopts	name="r"	graphics catalog entry name
&chrtopts	name="r"	graphics catalog entry name
&resdict	work.resdict	resource dictionary data set
&schedout	'data set name'	report schedule data set
&varlist	__ALL__	if Scope option is set to All Resources
	'resource name'	if Scope option is set to Selected Resource
&res	Lineprinter OR Graphics	specified by the Resolution option
&interval	'duration unit'	specified by the Frequency scheduling option
&mwhere		not currently initialized

Tabular Listing Reports

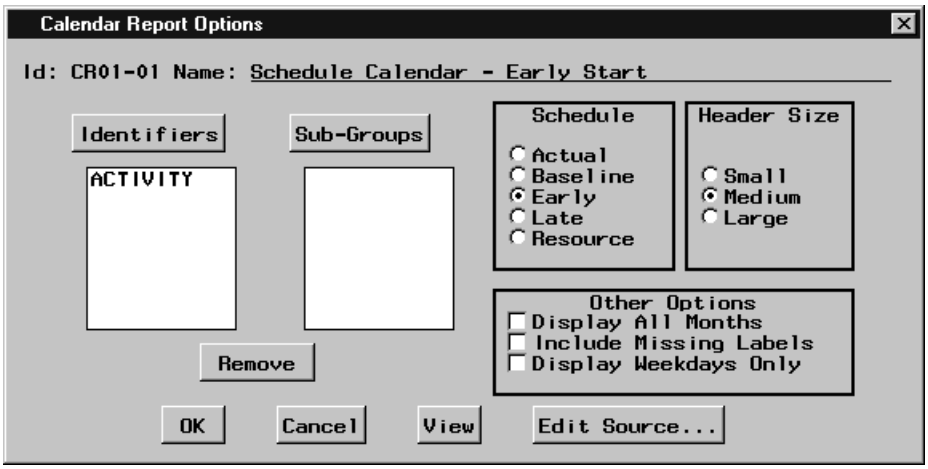
Name	Contents	Explanation
&prnopts	round	if Round values is selected
	double	if Double space is selected
	noobs	unless Print observation number is selected
	label	unless Suppress labels is selected
	n	if Print number of observations is selected
	uniform	if Format pages uniformly is selected

Calendar Report Options Window

This window provides access to the settings and options available for calendar reports. By changing values in this window, you can create and customize calendar reports to meet your specific needs. Note that some options may be unavailable if the active project does not contain the appropriate data. Also, if data unique to a specific project are required by a report, that report may fail when generated for a different project.

Note that reports can be generated and viewed to verify the results before any changes are saved. Access to the source code is also provided.

For a description of standard report options, see the "Standard Options" section on page 717.



Schedule

The setting of the Schedule option indicates which project schedule is to be used to mark activities on the calendar. You can choose from the actual, baseline, early, late, and resource-constrained schedules.

Header Size

This option specifies the type of heading to use in displaying the name of the month and year on the calendar report. When "Small" is selected, the month and year are displayed on one line. For the "Medium" selection, the month and year are displayed in a box 4-lines high, while the "Large" selection will display the month name 7-lines high (the year is included if space is available).

Display All Months

When selected, this option specifies that all months between the first and last activity start and finish dates, inclusive, are to be displayed (including months that contain no activities). If this option is not used, months with no activities are omitted from the report.

Include Missing Labels

When selected, this option specifies that missing values of identifier variables will appear in the label of an activity. If this option is not selected, missing values are ignored in labeling activities.

Display Weekdays Only

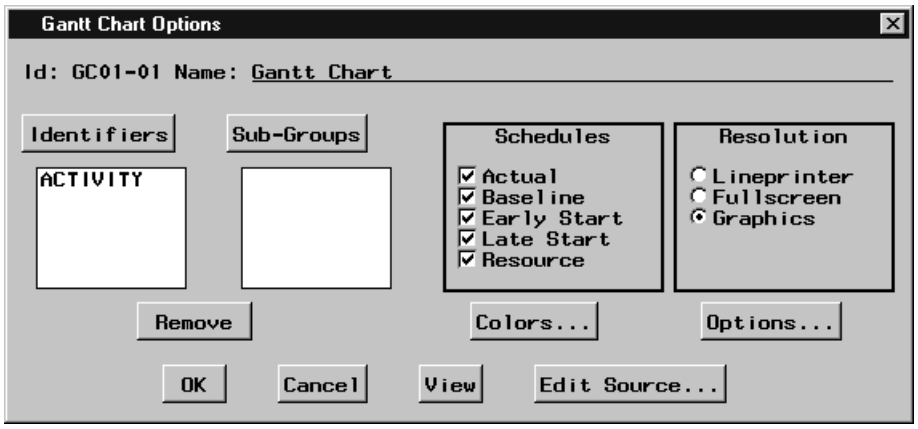
When selected, this option specifies that only days from Monday through Friday are to be displayed in the calendar.

Gantt Chart Options Window

This window provides access to the settings and options available for Gantt chart reports. By changing values in this window, you can create and customize Gantt chart reports to meet your specific needs. Note that some options may be unavailable if the active project does not contain the appropriate data. Also, if data unique to a specific project are required by a report, that report may fail when generated for a different project.

Note that reports can be generated and viewed to verify the results before any changes are saved. Access to the source code is also provided.

For a description of standard report options, see the “Standard Options” section on page 717.



Schedules

The Schedules options provide the capability to control which project schedules are to be drawn on the Gantt chart. You can choose one or more of the following schedules: actual, baseline, early start, late start, and resource-constrained. Note that at least one schedule should be selected. If the active project does not have the indicated schedules, the extra specifications are ignored when the report is generated.

Resolution

This option is used to specify the resolution of the Gantt chart report. The report can be produced with either lineprinter, fullscreen, or graphics-quality resolution.

Colors...

By pressing this button, you can access a window containing color options for the Gantt chart report. These options are used to control the colors of different portions of the Gantt chart output. Note that these options have no effect unless the Resolution option is set to produce a graphics-quality report. For more information, see the “Color Options” section on page 728.

Options...

By pressing this button, you can access a window containing additional options for the Gantt chart report.

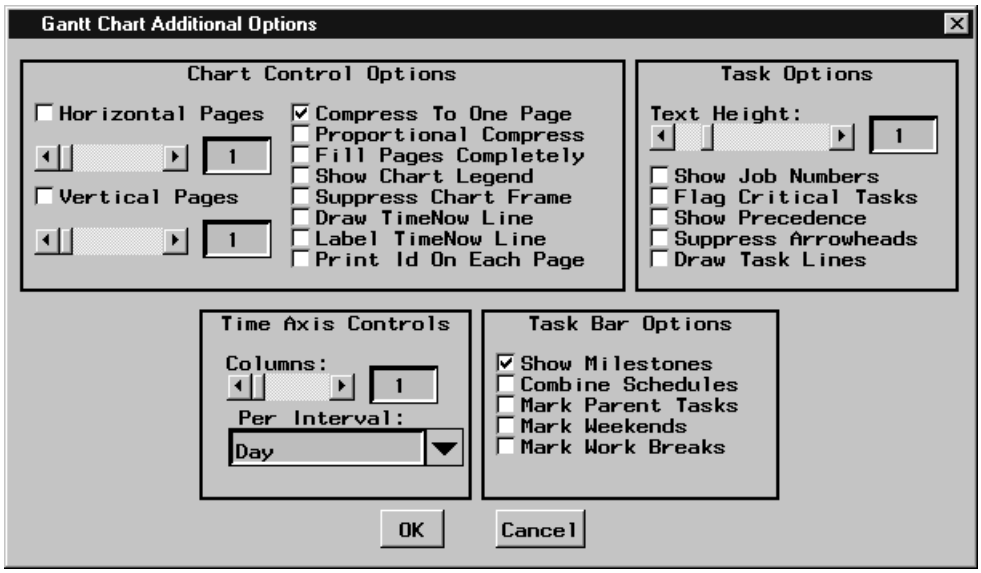


Chart Control Options

Horizontal Pages

When the Horizontal Pages option is selected (by activating the check box), the Gantt chart is scaled so that it spans the specified number of pages in the horizontal direction. The desired number of pages can be adjusted with the horizontal slider. Note that this option is used only when the report Resolution option is set for graphics-quality output. Due to intrinsic constraints on the output, the number of generated pages may not be exactly equal to the amount specified with this option.

Vertical Pages

When the Vertical Pages option is selected (by activating the check box), the Gantt chart is scaled so that it spans the specified number of pages in the vertical direction. The desired number of pages can be adjusted with the horizontal slider. Note that this option is used only when the report Resolution option is set for graphics-quality output. Due to intrinsic constraints on the output, the number of generated pages may not be exactly equal to the amount specified with this option.

Compress To One Page

When this option is specified, the Gantt chart is compressed so that it is drawn on one physical page. Note that this option is ignored unless the report Resolution option is set for graphics-quality output.

Proportional Compress

When this option is specified, the Gantt chart is compressed so that it is drawn on one physical page. This option is the same as the Compress To One Page option except that the compression of the chart is done proportionally to maintain the correct aspect ratio. In other words, the amount of horizontal and vertical compression is equal. Note that this option is used only when the report Resolution option is set for graphics-quality output.

Fill Pages Completely

When the Gantt chart spans multiple pages, this option causes each page of the Gantt chart to be filled completely before a new page is started. By default, the pages are constrained to contain an approximately equal number of activities.

Show Chart Legend

When this option is specified, a concise default legend is displayed at the end of each page of the Gantt chart.

Suppress Chart Frame

When this option is specified, the vertical boundaries to the left and right of the Gantt chart are not drawn; only the time axis and a parallel line at the bottom of the chart are drawn. If this option is not specified, the entire chart is framed. Note that this option is ignored unless the report Resolution option is set for graphics-quality output.

Draw TimeNow Line

When this option is specified, a vertical reference line is drawn on the time axis at the timenow date.

Label TimeNow Line

If the Draw TimeNow Line option is specified, selecting this option displays the value of the timenow date below the timenow line at the bottom of the Gantt chart. For information on timenow, see the glossary on page 751.

Print Id On Each Page

When the Gantt chart spans multiple pages, selecting this option causes all values in the Identifier list to be displayed on each page of the Gantt chart.

Task Options

Text Height

When text height is specified as *h*, all text drawn on the Gantt chart (excluding titles and footnotes) is *h* times the value of the global text height option, which is specified in the Report Options window. For more information, see the "Report Options Window" section on page 714. Note that this option is used only when the report Resolution option is set for graphics-quality output.

Show Job Numbers

When this option is specified, an identifying job number is displayed beside each activity on the Gantt chart.

Flag Critical Tasks

When selected, this option indicates that critical activities are to be flagged as critical or supercritical. Critical activities are marked CR, and supercritical activities are marked SC on the left side of the Gantt chart.

Show Precedence

When this option is specified, precedence relationships are drawn on the Gantt chart. This option is used only when the report Resolution option is set for graphics-quality output.

Suppress Arrowheads

When the Show Precedence option is specified, selecting this option indicates that arcs drawn on the Gantt chart should be drawn without arrowheads. This option is ignored unless the report Resolution option is set for graphics-quality output.

Draw Task Lines

When specified, this option indicates that lines are to be drawn from the left edge of the Gantt chart to the beginning of the activity schedule bar.

Time Axis Controls

Columns

The horizontal slider is used to specify the number of columns (amount of space) for drawing each interval on the time axis, where interval is the value indicated with the Per Interval option. These options can be used to scale the size of the Gantt chart.

Per Interval

The Per Interval combo box indicates the duration unit to use for scaling the size of the Gantt chart. The Columns option indicates the number of columns (amount of space) available for drawing each specified interval on the time axis.

Task Bar Options

Show Milestones

When this option is specified, all activities that have zero duration are represented on the Gantt chart by a milestone symbol. This option is ignored unless the report Resolution option is set for graphics-quality output.

Combine Schedules

When this option is specified, the early/late and actual schedule bars of an activity are concatenated into a single bar on the Gantt chart. A vertical reference line is automatically drawn at the current timenow date. This timenow line acts to partition the Gantt chart into two regions; the region to the left of the timenow line reporting the actual schedule (events that have already taken place) and the region to the right (including the timenow line) reporting only the predicted early/late schedule.

Mark Parent Tasks

When this option is specified, symbols are added to the activity bars of supertasks on the Gantt charts. These symbols emphasize the parent-child relationship between the supertask and its subtasks. This option is used only when the report Resolution option is set for graphics-quality output.

Mark Weekends

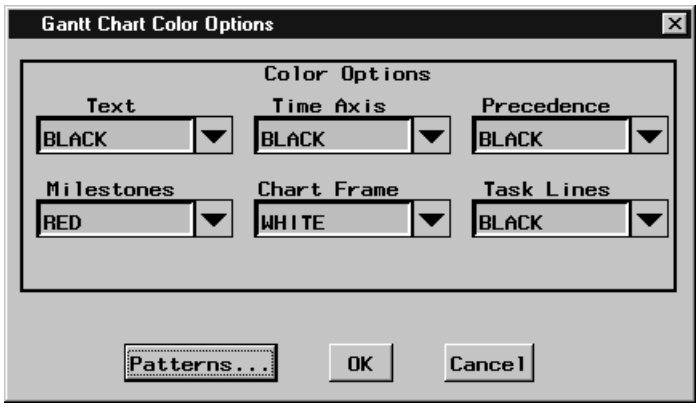
When this option is specified, all weekends (or nonworked days during a week) are marked on the Gantt chart.

Mark Work Breaks

When this option is specified, all work breaks (nonworked periods) during a day are marked on the Gantt chart. This option automatically activates the Mark Weekends option.

Color Options

This window is used to set options that control the color of various features of the Gantt chart report. Note that these options are ignored unless the report Resolution option is set for graphics-quality output.



Text

The Text combo box can be used to specify the color to use for displaying text that appears on the Gantt chart. Note that this color specification does not apply to titles, footnotes or any annotated text.

Time Axis

The Time Axis combo box can be used to specify the color to use for displaying the time axis along the top of the Gantt chart. The same color is also used for the frame around the chart area (where the activity bars are drawn).

Precedence

The Precedence combo box can be used to specify the color to use for drawing the precedence connections on the Gantt chart. Note that this option is used only when precedence relationships are to be drawn on the Gantt chart.

Milestones

The Milestone combo box can be used to specify the color to use for drawing any milestone symbols that appear on the Gantt chart.

Chart Frame

The Chart Frame combo box can be used to specify the background color for the chart area (where the activity bars are drawn).

Task Lines

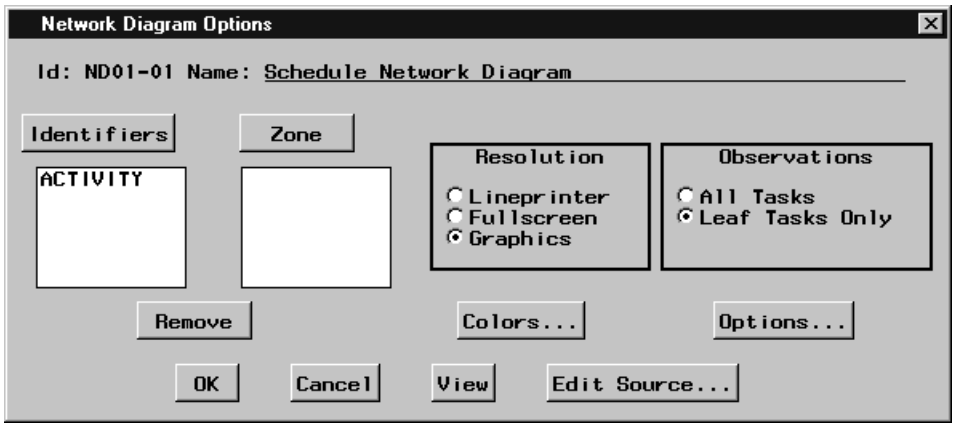
The Task Lines combo box can be used to specify the color to use for drawing the task lines on the Gantt chart. Note that this option is used only when task lines are to be drawn on the Gantt chart.

Network Diagram Options Window

This window provides access to the settings and options available for network diagram reports. By changing values in this window, you can create and customize reports to meet your specific needs. Note that some options may be unavailable if the active project does not contain the appropriate data. Also, if data unique to a specific project are required by a report, that report may fail when generated for a different project.

Note that reports can be generated and viewed to verify the results before any changes are saved. Access to the source code is also provided.

For a description of standard report options, see the "Standard Options" section on page 717.



Zone

When the Zone button is pressed, a window is opened to enable you to select a Zone Variable. The selection is displayed on the window. The zone variable can be removed by selecting the variable and pressing the Remove button.

Zone Variable

The Zone Variable is used to divide the network diagram into horizontal bands or zones corresponding to the distinct values of the variable. Most projects have at least one natural classification of the different activities in the project: department, type of work involved, location of the activity, and so on. By specifying a zone variable, you can use this classification to subdivide the network diagram. The zones are automatically labeled with the zone variable values and are separated by dividing lines. Use the Zone button to select a zone variable.

Remove

When this button is pressed, highlighted selections in the Identifier and Zone lists are deleted.

Resolution

This option is used to specify the resolution of the network diagram report. The report can be produced with either lineprinter, fullscreen, or graphics-quality resolution.

Observations

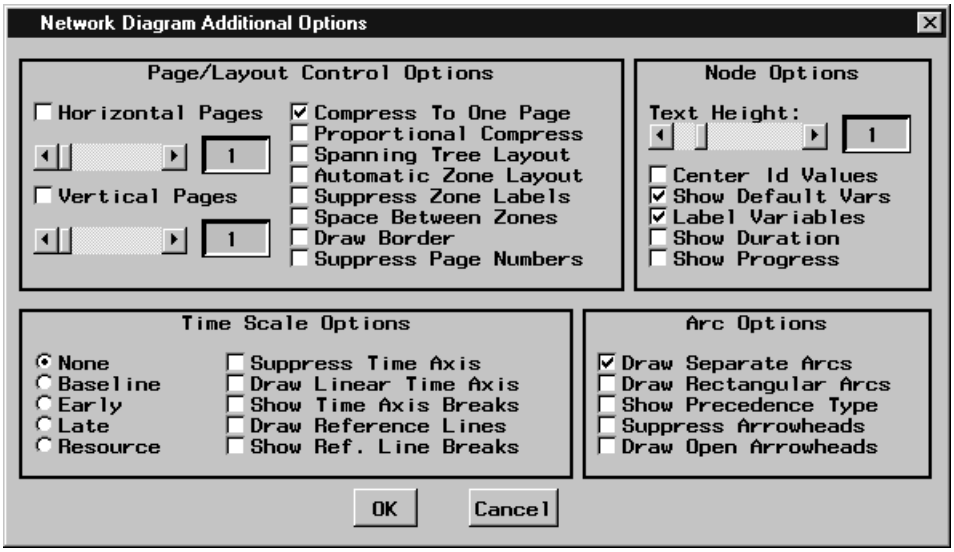
This option is used to specify which observations are used to produce the network diagram. For hierarchical projects, selecting Leaf Tasks Only means that only the lowest level tasks appear in the network diagram. When All Tasks is specified, all tasks (regardless of their hierarchical relationship) appear in the network diagram as separate nodes.

Colors...

By pressing this button, you can access a window containing color options for the network diagram report. These options are used to control the colors of different portions of the network diagram. Note that these options are ignored unless the Resolution option is set to produce a graphics-quality report. For more information, see the "Color Options" section on page 734.

Options...

By pressing this button, you can access a window containing additional options for the network diagram report.



Page/Layout Control Options

Horizontal Pages

When the Horizontal Pages option is selected (by activating the check box), the network diagram is scaled so that it spans the specified number of pages in the horizontal direction. The desired number of pages can be adjusted with the horizontal slider. Note that this option is used only when the report Resolution option is set for graphics-quality output. Due to intrinsic constraints on the output, the number of generated pages may not be exactly equal to the amount specified with this option.

Vertical Pages

When the Vertical Pages option is selected (by activating the check box), the network diagram is scaled so that it spans the specified number of pages in the vertical direction. The desired number of pages can be adjusted with the horizontal slider.

Note that this option is used only when the report Resolution option is set for graphics-quality output. Due to intrinsic constraints on the output, the number of generated pages may not be exactly equal to the amount specified with this option.

Compress To One Page

When this option is specified, the network diagram is compressed so that it is drawn on one physical page. Note that this option is ignored unless the report resolution option is set for graphics-quality output.

Proportional Compress

When this option is specified, the network diagram is compressed so that it is drawn on one physical page. This option is the same as the Compress To One Page option except that the compression of the diagram is done proportionally to maintain the correct aspect ratio. In other words, the amount of horizontal and vertical compression is equal. Note that this option is ignored unless the report Resolution option is set for graphics-quality output.

Spanning Tree Layout

When this option is specified, the nodes in the network diagram are positioned using a spanning tree. This method typically results in a wider layout than the default. However, for networks that have totally disjoint pieces, this option separates the network into connected components (or disjoint trees). This option is ignored if a time axis is being drawn or if the zone variable is specified.

Automatic Zone Layout

When specified, this option allows automatic zoning (or dividing) of the network into connected components. This option is equivalent to adding an automatic zone variable that associates a tree number for each node. The tree number refers to a number assigned automatically to each distinct tree of a spanning tree of the network.

Suppress Zone Labels

When this option is selected and a zone variable is specified, the zone labels and dividing lines are omitted from the network diagram.

Space Between Zones

When this option is selected and the zone variable is specified, extra empty space is placed between consecutive zones.

Draw Border

When this option is specified, a border (or frame) is drawn around the network diagram. This option is ignored if no time axis is being drawn or if no zone variable is specified.

Suppress Page Numbers

When this option is selected, no page numbers are drawn in the upper right-hand corner of a multipage network diagram. By default, pages are numbered from left to right, top to bottom.

Node Options

Text Height

When text height is specified as *h*, all text drawn on the network diagram (excluding titles and footnotes) is *h* times the value of the global text height option, which is specified in the Report Options window. For more information on this window, see the "Report Options Window" section on page 714. Note that this option is ignored unless the report Resolution option is set for graphics-quality output.

Center Id Values

When this option is specified, all values of variables in the Identifier list are centered within each node in the network diagram. By default, character valued variables are left justified and numeric valued variables are right justified within each node. Note that this option is ignored unless the report Resolution option is set for graphics-quality output.

Show Default Vars

When this option is specified, values of the default variables are displayed within each node. These values include the activity name and any project schedule dates or float amounts. If this option is not selected, only values appearing in the Identifier list are displayed.

Label Variables

When this option is specified, short (3-character) labels are displayed in front of the values that are listed within each node of the network diagram. By default, there are no labels.

Show Duration

When this option is specified, the duration of each activity is listed within the corresponding node in the network diagram.

Show Progress

When this option is specified, the current status (completed, in-progress, or pending) is indicated within each node of the network diagram. If the network diagram is created with lineprinter or fullscreen resolution, activities in progress are outlined with the letter P and completed activities are outlined with the letter F; in graphics-quality resolution, in-progress activities are marked with a diagonal line across the node from the bottom left to the top right corner, while completed activities are marked with two diagonal lines. Pending activities are drawn in the default manner.

Time Scale Options

Schedule

Selecting a Schedule indicates that a time axis is to be drawn across the top of the network diagram and nodes are to be positioned horizontally according to the values of the selected schedule start times. The minimum and maximum values are used to determine the time axis. You can choose from the baseline, early, late, and resource-constrained schedules.

Suppress Time Axis

When this option is selected, no time axis is drawn on the network diagram; however, nodes are still positioned horizontally according to the Schedule option.

Draw Linear Time Axis

When a time axis is being drawn on the network diagram, the axis is divided up into even intervals based on the duration unit. By default, only those intervals (columns) that contain at least one activity are drawn. When this option is specified, all intervals are drawn. In some cases, this option may cause the network diagram to span many pages in the horizontal direction.

Show Time Axis Breaks

When this option is specified, breaks in the time axis are indicated by drawing a jagged break in the time axis line just before the tick mark corresponding to the break. The time axis is determined by the setting of the Schedule option.

Draw Reference Lines

When this option is specified, a reference line is drawn at every tick mark (column) along the time axis. Reference lines are vertical lines drawn at specific positions along the time axis to indicate time intervals. The time axis is determined by the setting of the Schedule option.

Show Ref. Line Breaks

When this option is specified, breaks in the time axis are indicated by drawing a zigzag line down the network diagram just before the tick mark corresponding to the break. The time axis is determined by the setting of the Schedule option.

Arc Options

Draw Separate Arcs

When this option is specified, arcs drawn on the network diagram are allowed to follow distinct tracks. By default, all segments of the arcs are drawn along a central track between the nodes, which may cause several arcs to be drawn on top of one another. If this option is selected, the arcs are drawn so that they do not overlap. Note that this option is ignored unless the report Resolution option is set for graphics-quality output.

Draw Rectangular Arcs

When this option is specified, all arcs are drawn with rectangular corners. By default, arcs are drawn with rounded corners when the report Resolution option is set for graphics-quality output.

Show Precedence Type

When this option is specified, arcs are drawn to indicate the type of logical relationship between the activities at either end of the arc. The start and end points of the arcs are adjusted to represent the specific relationship. By default, all arcs are drawn out of the right edge of nodes and into the left edge of nodes.

Suppress Arrowheads

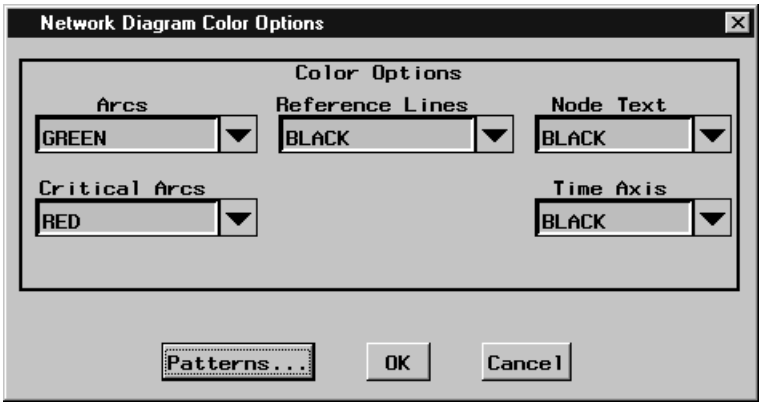
When this option is specified, all arcs are drawn without arrowheads.

Draw Open Arrowheads

When this option is selected, the arrowheads on the end of the arcs are not filled. By default, the arrowheads are filled (solid). Note that this option is ignored unless the report Resolution option is set for graphics-quality output.

Color Options

This window is used to set options that control the color of various features of the network diagram. Note that these options are ignored unless the report Resolution option is set for graphics-quality output.



Arcs

The Arcs combo box can be used to specify the color to use for drawing the connecting lines between the nodes in the network diagram.

Critical Arcs

The Critical Arcs combo box can be used to specify the color to use for drawing the arcs connecting critical activities in the network diagram.

Reference Lines

The Reference Lines combo box can be used to specify the color to use for drawing reference lines on the network diagram. Reference lines are vertical lines drawn at specific positions along the time axis to indicate time intervals. Note that this option is used only when a time axis is drawn along the top of the network diagram.

Node Text

The Node Text combo box can be used to specify the color to use for displaying text that appears within nodes on the network diagram. Note that this color specification does not apply to titles, footnotes, or any annotated text.

Time Axis

The Time Axis combo box can be used to specify the color to use for displaying the time axis along the top of the network diagram. The same color is also used for the frame around the chart area (where the activity bars are drawn). Note that this option is used only when a time axis is drawn along the top of the network diagram.

Resource Report Options Window

This window provides access to the settings and options available for resource reports. By changing values in this window, you can create and customize reports to meet your specific needs. Note that some options may be unavailable if the active project does not contain the appropriate data. Also, if data unique to a specific project are required by a report, that report may fail when generated for a different project.

Note that reports can be generated and viewed to verify the results before any changes are saved. Access to the source code is also provided.

For a description of standard report options, see the "Standard Options" section on page 717.

Resource

You can use the Resource combo box to select a specific resource for the report. By default, all resources are used for the report. When a resource is selected and the Scope option indicates that the selected resource is to be used, the resulting report contains summarized information for that resource only.

Scope

The Scope option indicates whether the report is to utilize data about all project resources or only the resource specified with the Resource option. By default, all resources are used for the report. When a resource is selected with the Resource option and Selected Resource is chosen, the resulting report contains summarized information for the selected resource only.

Resolution

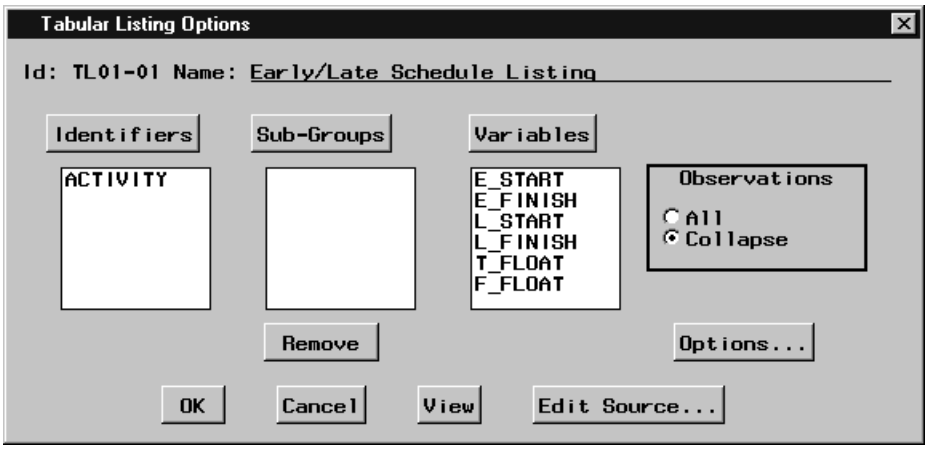
This option is used to specify the resolution of the resource report. The report can be produced with either lineprinter or graphics quality.

Tabular Listing Options Window

This window provides access to the settings and options available for tabular listing reports. By changing values in this window, you can create and customize reports to meet your specific needs. Note that some options may be unavailable if the active project does not contain the appropriate data. Also, if data unique to a specific project are required by a report, that report may fail when generated for a different project.

Note that reports can be generated and viewed to verify the results before any changes are saved. Access to the source code is also provided.

For a description of standard report options, see the "Standard Options" section on page 717.



Variables

When this button is pressed, a window is opened to allow selections to be added to the Variable list. Selections are added to the bottom of the list as they are chosen. Items can be removed from the Variable list by selecting the desired items and pressing the Remove button.

Variable List

The Variable list contains the list of variables that are to be displayed in the tabular listing report. The information contained in these variables is displayed to the right of the information provided by the Identifier list in the report. Use the Variables button to add items to this list.

Remove

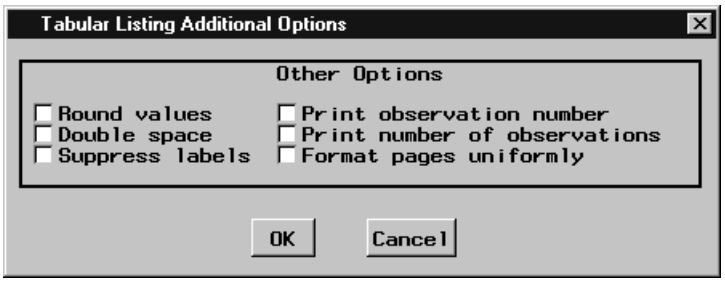
When this button is pressed, highlighted selections in the Identifier, Sub-Group, and Variable lists are deleted.

Observations

This option enables you to control which observations are used for the tabular listing report. The All selection indicates that all records in the input data set are to be used, while the Collapse selection indicates that only one observation should be displayed for each activity. When activities have multiple successors (as is usually the case), the input data set contains multiple records for some activities. Thus, when all observations are used, there can be some duplication in the resulting report.

Options...

By pressing this button, you can access a window containing additional options for the tabular listing report. These options are used to format the output.



Additional Options

Round values

When you select this option, all numeric variables are rounded to two decimal places. Values are rounded before summing for totals and subtotals.

Double space

When you select this option, the report is double spaced. If this option is not specified, the report is single spaced.

Suppress labels

By default, variable labels are displayed instead of the variable names as the column heading in the tabular listing report. If you choose this option, the labels are suppressed and the variable names are used instead.

Print observation number

When this option is selected, an observation (record) number is displayed for each observation in the tabular listing report. If the Identifier list is not empty, this option has no effect.

Print number of observations

When this option is selected, the total number of observations (records) in the tabular listing report is displayed at the end of the report.

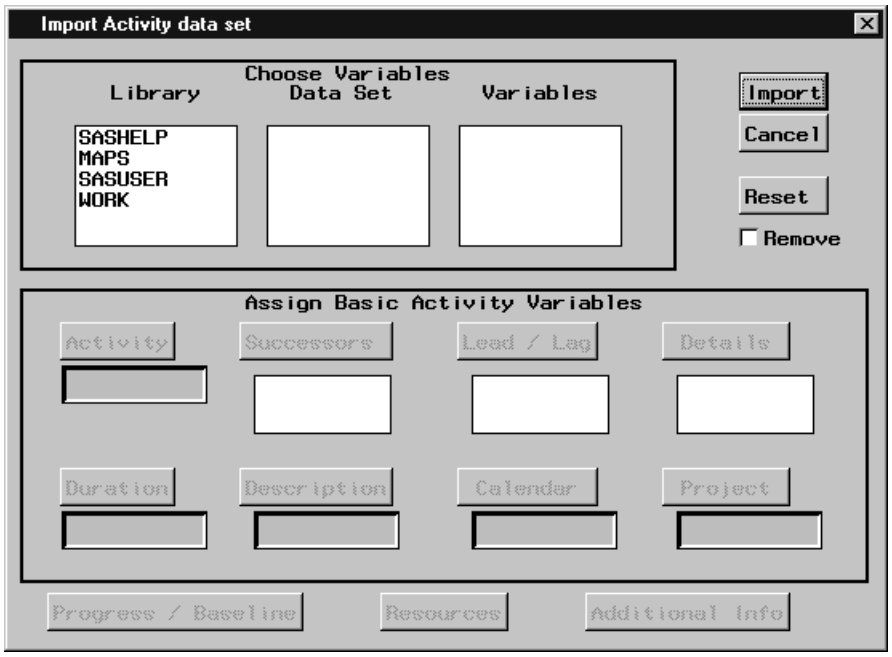
Format pages uniformly

When this option is specified, all pages of the tabular listing report are formatted uniformly. If this option is not specified, some pages may be spaced differently (depending on the data).

Import Activity Data Set Window

This window enables you to import a SAS data set that contains project activity information. Projman assumes that the selected data set is in the format appropriate for input to the CPM or PM procedure. For more information, refer to Chapter 2, “The CPM Procedure” or Chapter 6, “The PM Procedure.”

When you select the data set that you want to import, you must identify certain variables within that data set. Projman attempts to recognize the variables by searching for some standard names; however, it is likely that you will need to select the required variables. When all the necessary selections have been made and the activity data set is imported, a new project is created.



Standard Import Options

The following set of options are common to several different import windows.

Library

This list contains all currently defined SAS library names. Use this list to select the library that contains the data set that you want to import. Selection of a library automatically populates the Data Set list.

Data Set

This list contains the names of all SAS data sets that currently reside in the selected library. When you select the data set that you want to import, the Variables list is populated automatically. When a data set is selected, some automatic variable selection may also take place.

Variables

This list contains the names of the variables that currently exist in the selected SAS data set. To make import variable selections, simply select the desired variable or variables in this list and press the appropriate button.

Import

When all necessary selections have been made, pressing this button causes the selected data set to be imported. If additional selections are required, an attention window is displayed.

OK

Pressing this button accepts the current selections and closes the window.

Cancel

Pressing this button cancels the current selections and closes the window or aborts the import process if it is selected in the primary import window.

Reset

Pressing this button causes all variable selections in the current window to be cleared.

Remove

When the Remove check box is selected, pressing a variable button causes the corresponding import variable selection to be cleared. You can use the Reset button to clear all import variable selections in the current window.

Secondary Windows

Progress / Baseline

Pressing this button opens a window that enables you to specify variables that contain activity progress information and baseline schedules. This information is optional. For information on this window, see the "Progress/Baseline Information" section on page 741.

Resources

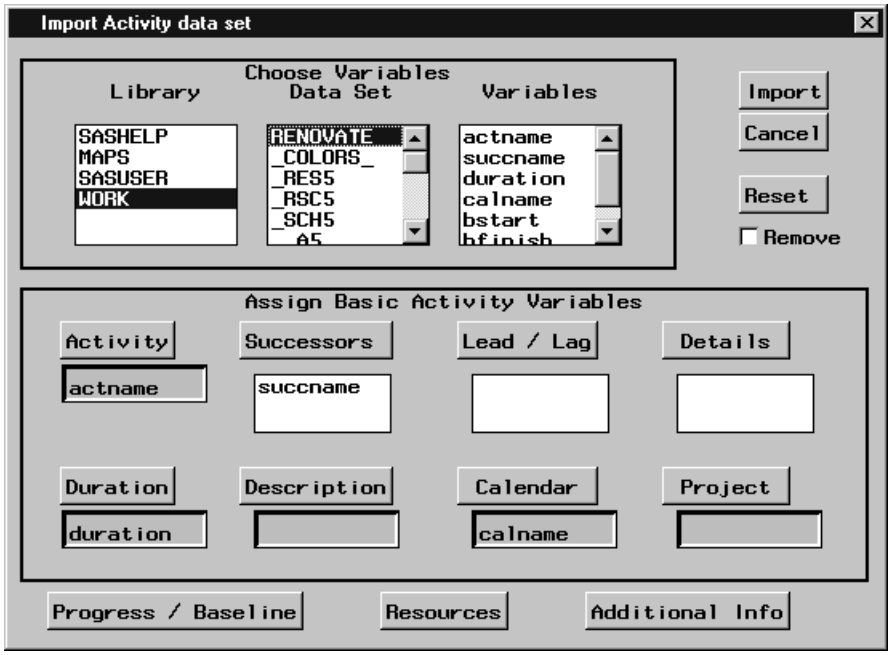
Pressing this button opens a window that enables you to identify the variables that contain resource requirements information for the activities. You can also specify which variable contains the activity work rate. This information is optional. For information on this window, see the "Resource Information" section on page 742.

Additional Info

Pressing this button opens a window that enables you to specify variables that contain information about activity target (alignment) dates, limits on activity delay, activity priorities for resource scheduling, and activity splitting. This information is optional. For information on this window, see the "Additional Information" section on page 743.

Basic Activity Information

This window is used to identify variables that contain basic activity information. For a description of standard import options, see the "Standard Import Options" section on page 738.



Activity

The Activity variable should contain values that represent the names of the activities of the project. These names are assumed to be unique for each activity. This variable can contain either character or numeric values. If Successor variables are specified, the format must be the same as the Activity variable. An Activity variable is required.

Successors

The Successor variables should contain values that represent the names of the successor activities of the project. This variable can contain either character or numeric values. If Successor variables are specified, the format must be the same as the Activity variable.

Description

The Description variable normally will contain values that provide more detailed information (that is, longer name) about the activity. This variable can be either character or numeric.

Project

The Project variable should contain values that represent the names of the parent (project) activities of the project. In other words, this variable indicates the parent-child(supertask-subtask) relationship between the activity named in the Project variable and the activity named in the Activity variable. This variable should be in the same format as the Activity variable.

Duration

The Duration variable should contain values that represent the duration of each project activity. The unit of duration is assumed to be the same for each activity. This variable must be numeric.

Lead / Lag

The Lead / Lag variables should contain values that represent the lags (or nonstandard precedence relationships) between the activities specified in the Activity and Successor variables. Although it is not required, the number of Lead / Lag variables should match the number of Successor variables. The lag values are required to follow the same naming convention as that used by the CPM procedure. For more information, see the “” section on page 86.

Calendar

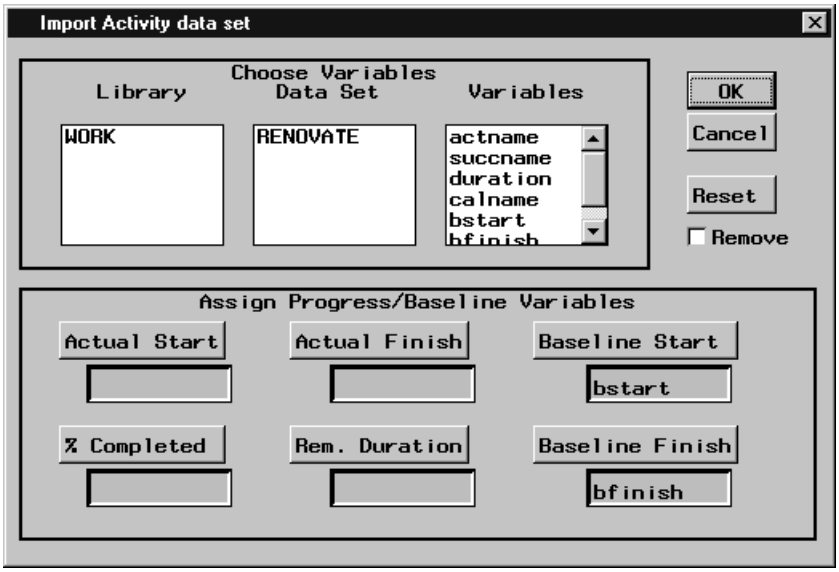
The Calendar variable should contain values that represent the name of the calendar that the activity is to follow. Projman assumes that the calendars will be defined after the activities are imported. At that time, you can create the calendars manually or import a calendar data set. This variable can be either character or numeric.

Details

The Details variables can be used to import nonstandard information about the activities that is stored in the import data set. For instance, you may want to import information stored in variables representing the phase of the project or the department that is responsible for the activity. These variables can be both character and numeric.

Progress/Baseline Information

This window is used to identify variables that contain activity progress information and baseline schedules. For a description of standard import options, see the “Standard Import Options” section on page 738.



Actual Start

The Actual Start variable should contain values that represent the actual start date of the activity. This variable must be numeric.

Actual Finish

The Actual Finish variable should contain values that represent the actual finish date of the activity. This variable must be numeric.

% Completed

The Percent Completed variable should contain values representing the percentage of the activity that is completed. This variable must be numeric and should contain values between 0 and 100.

Rem. Duration

The Remaining Duration variable should contain values that represent the amount of time remaining for an activity that is in progress. This variable must be numeric and should contain nonnegative values. The unit of duration is assumed to be the same as that for the Duration variable.

Baseline Start

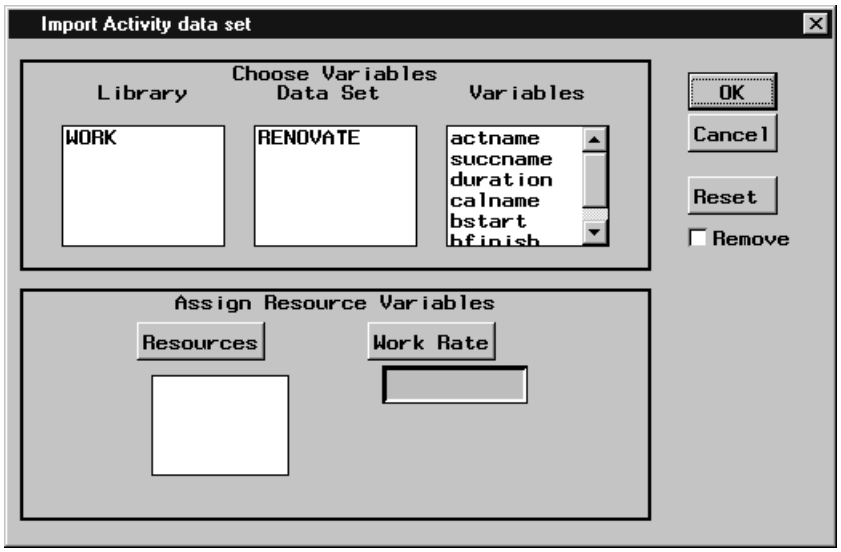
The Baseline Start variable should contain values that represent the baseline start date of the activity. This variable must be numeric.

Baseline Finish

The Baseline Finish variable should contain values that represent the baseline finish date of the activity. This variable must be numeric.

Resource Information

This window is used to identify variables that contain resource requirements information. For a description of standard import options, see the “Standard Import Options” section on page 738.



Resources

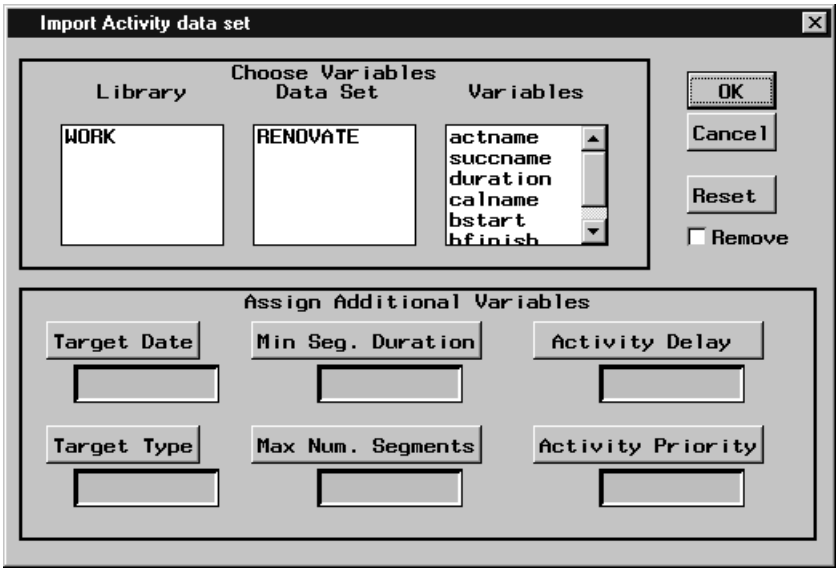
The Resource variables should contain values that indicate the amount of resource that is needed for a particular activity. For consumable resources, this value represents the amount of resource needed per unit of duration; for replenishable resources, it indicates the amount of resource that must be available throughout the duration of the activity. These variables must be numeric.

Work Rate

The Work Rate variable should contain values that indicate the total amount of work (time) required by one unit of a resource for a particular activity. This variable can be used to drive the activity duration for each resource required by the activity using the resource rate specified in the corresponding Resource variable.

Additional Information

This window is used to identify variables that contain additional activity information. For a description of standard import options, see the "Standard Import Options" section on page 738.



Target Date

The Target Date variable should contain values that represent the date portion of an activity alignment constraint. For example, an activity must finish on or before a particular date. The type of alignment constraint is specified in the Target Type variable. The Target Date variable must be numeric.

Target Type

The Target Type variable should contain values that represent the type portion of an activity alignment constraint. For example, an activity must finish on or before a particular date. The date portion of the alignment constraint is specified in the Target Date variable. The target type values are required to follow the same naming convention as that used by the CPM procedure. For more information, see the "ALIGNTYPE Statement" section on page 69.

Min Seg. Duration

The Minimum Segment Duration variable should contain values that indicate the minimum duration of a single segment of an activity (when activity splitting is allowed). This variable must be numeric.

Max Num. Segments

The Maximum Number of Segments variable should contain values that indicate the maximum number of segments into which an activity can be split (when activity splitting is allowed). This variable must be numeric.

Activity Delay

The Activity Delay variable should contain values that indicate the maximum amount of time by which an activity can be delayed due to resource unavailability. This variable must be numeric.

Activity Priority

The Activity Priority variable should contain values that indicate the priority of an activity (lower values indicate higher priority). The activity priority can be used to order activities that are waiting for an unavailable resource. This variable must be numeric.

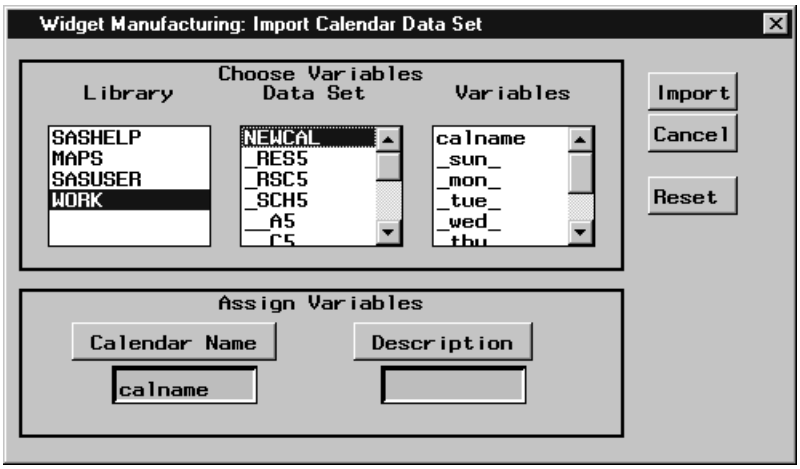
Import Calendar Data Set Window

This window enables you to import a SAS data set that contains calendar information. Projman assumes that the selected data set is in the format appropriate for input to the CPM or PM procedure. For more information, see the "CALEDATA Data Set" section on page 98.

When you select the data set that you want to import, you must identify certain variables within that data set. Projman attempts to recognize the variables by searching for some standard names; however, it is likely that you will need to select the required variables. When all the necessary selections have been made and the calendar data set is imported, the appropriate calendars are created.

Note that valid calendar data sets are expected to contain the following standard variables: _SUN_, _MON_, _TUE_, _WED_, _THU_, _FRI_ and _SAT_.

For a description of standard import options, see the "Standard Import Options" section on page 738.



Calendar Name

The Calendar Name variable should contain values that represent the names of the individual calendars. This variable can be either character or numeric, and it is required.

Description

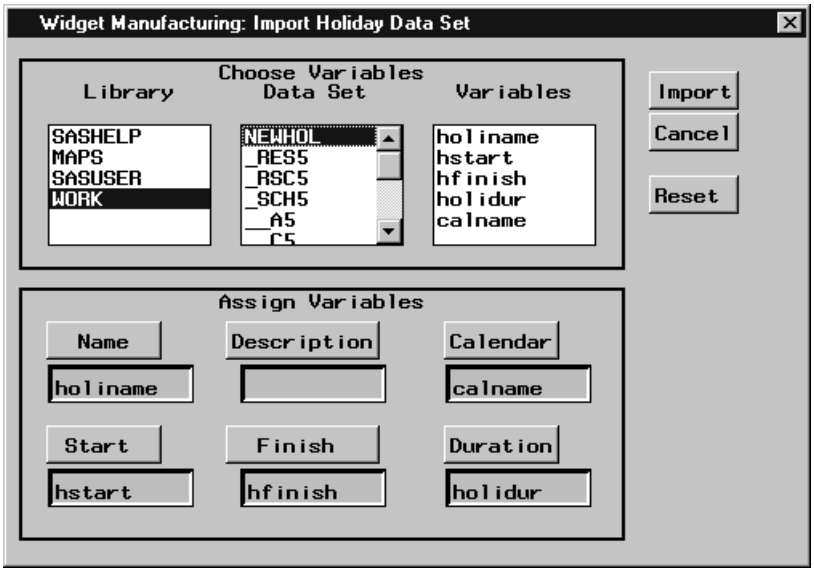
The Description variable normally contains values that provide more detailed information (that is, longer name) about the calendar. This variable can be either character or numeric.

Import Holiday Data Set Window

This window enables you to import a SAS data set that contains holiday information. Projman assumes that the selected data set is in the format appropriate for input to the CPM or PM procedure. For more information, see the "HOLIDATA Data Set" section on page 99.

When you select the data set that you want to import, you must identify certain variables within that data set. Projman attempts to recognize the variables by searching for some standard names; however, it is likely that you will need to select the required variables. When all the necessary selections have been made and the holiday data set is imported, the appropriate holidays are created.

For a description of standard import options, see the "Standard Import Options" section on page 738.



Name

The Name variable should contain values that represent a short name for each holiday. This variable can be either character or numeric.

Description

The Description variable normally contains values that provide more detailed information (that is, longer name) about the holiday. This variable can be either character or numeric.

Calendar

The Calendar variable should contain values that represent the name of the calendar to which the holiday belongs. Projman assumes that the calendars already exist. If they do not, after the import, you can create the calendars or import a calendar data set. This variable can be either character or numeric.

Start

The Start variable should contain values that indicate the start date of each holiday. This variable must be numeric, and it is required.

Finish

The Finish variable should contain values that indicate the finish date of each holiday. This variable must be numeric. This variable is optional; however, if the Duration variable is not specified, Projman assumes that each holiday is to last one duration unit.

Duration

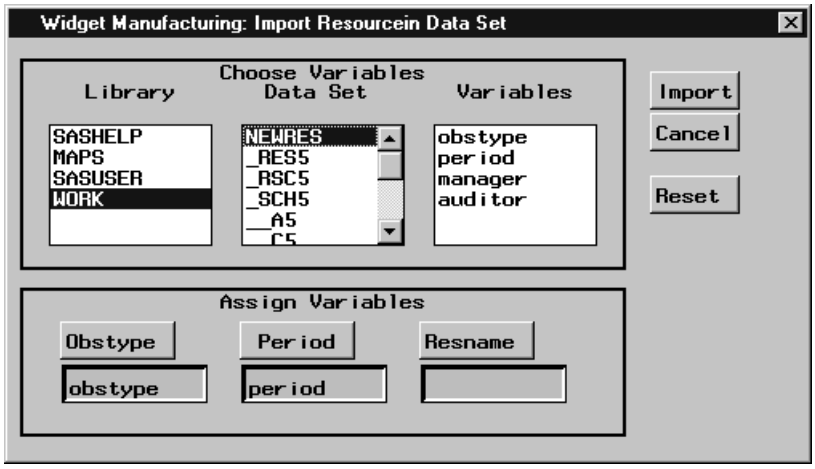
The Duration variable should contain values that indicate the length of each holiday. This variable must be numeric. This variable is optional; however, if the Finish variable is not specified, Projman assumes that each holiday is to last one duration unit.

Import Resourcein Data Set Window

This window enables you to import a SAS data set that contains resource information. Projman assumes that the selected data set is in the format appropriate for input to the CPM or PM procedure. For more information, see the "RESOURCEIN= Input Data Set" section on page 107.

When you select the data set that you want to import, you must identify certain variables within that data set. Projman attempts to recognize the variables by searching for some standard names; however, it is likely that you will need to select the required variables. When all the necessary selections have been made and the resourcein data set is imported, the appropriate resources are created.

For a description of standard import options, see the "Standard Import Options" section on page 738.



Obstype

The Obstype variable should contain values that represent the type identifier for the particular observation. The Obstype values are required to follow the same naming convention as that used by the CPM procedure. For more information, see the "" section on page 82. This variable must be character, and it is required.

Period

The Period variable should contain values that indicate the specific date for each observation containing resource availability information. This variable must be numeric.

Resname

The Resname variable should contain values that represent the names of resources that have alternate (substitutable) resource specifications. This variable must be character.

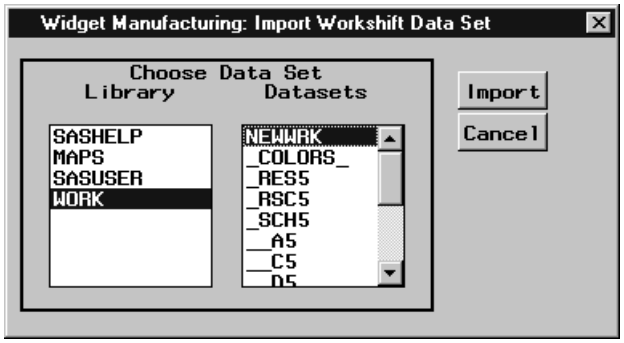
Import Workshift Data Set Window

This window enables you to import a SAS data set that contains workshift information. Projman assumes that the selected data set is in the format appropriate for input to the CPM or PM procedure. For more information, see the "WORKDATA Data Set" section on page 97.

Valid workshift data sets contain numeric variables only. If the selected data set does not contain any numeric variables, an attention window is raised.

When you have made the necessary selections, the workshift data set is imported and the appropriate workshifts are created.

For a description of standard import options, see the "Standard Import Options" section on page 738.



Library

This list contains all currently defined SAS library names. Use this list to select the library that contains the data set that you want to import. Selection of a library automatically populates the Datasets list.

Datasets

This list contains the names of all SAS data sets that currently reside in the selected library. Select the data set that you want to import.

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